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BRUNT'S
GARDEN
GUIDE



SECOND EDITION

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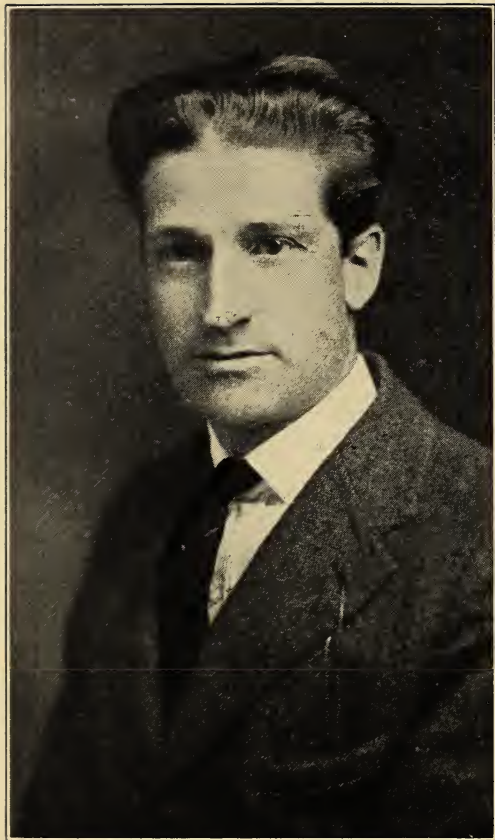
Published by

ORCHADOTTE NURSERIES

FRANKLIN BRUNT, Proprietor

West Point, Montgomery County, Penna.

Twenty-five Cents



FRANKLIN BRUNT
At Your Service

Foreword

FRIEND FLOWER LOVER:

We hope that you will find many improvements in this, the second edition of *Brunt's Garden Guide*. We will not delay your entry into the following pages, which will speak for themselves, any longer than to suggest that you preserve this copy and use it for future reference. We have endeavored to make it interesting and the descriptions complete, as we find the plants growing here at Orchardotte, which is located about 22 miles northwest from the Philadelphia City Hall.

At Your Service

FRANKLIN BRUNT

The Hardy Garden

What a host of pleasing thoughts the word garden brings to the mind—of a delightful assembly of colors, or of delicate intimate spots of harmonizing tints; of long perennial borders of old fashioned favorite flowers, or of intensely interesting clumps of chosen sorts; of breaths of fragrant air; of birds; of pools; of accomplishments in growing the daintier and more pampered sorts of flowers; these thoughts and scores of others. The best materials to bring about these desirous results are the

HERBACEOUS PERENNIALS

These plants, as their name implies, live for a considerable period of years, the part above the ground dying each winter and being renewed the next spring with fresh vigor. These plants enjoy a popularity that is constantly growing greater, due to their spirited and perpetual charm. Such plants differ from annuals in that they are more permanent, yielding their fragrance and displaying their color season after season under suitable care. They may be used as borders, in woodland, or the natural garden, and even in formal flower gardens their effect is always striking and satisfying. A beautiful series of bloom from early spring to late fall may be had by reason of their different times of flowering and their great variety of color. For cutting, the flowers also have great value.

ARRANGING THE PERENNIAL BORDER

When setting out herbaceous perennial plants in a border we should arrange them so as to mass those groups together the colors of whose flowers will harmonize. Many of us like to see a gorgeous array of colors, but this can be effected without having them inharmonious. It is always a safe rule to place a group of white flowered plants between two groups the colors of which are inharmonious. Sometimes contrasts are pleasing to the eye, for example: Blue Delphinium and the yellow Coreopsis make an excellent contrast. Carefully studied spots or entire borders of harmonious and delicate tints are always interesting, such as light pink and white, gray and pink, pink and blue, light blue and lemon. Large masses of one kind of plant are more effective than plants set singly.

Our consideration should go farther than color; we should plan for a succession of blooms and arrange the plants with a regard for proper combination of heights, using the tall growing kinds in the back of the border, the medium tall in front of these and the low growing still nearer the front, with the dwarf varieties as an edging to connect the border with the lawn. It is also well to have a few taller-growing varieties interspersed throughout, so as to give a more natural appearance which is

so necessary in any planting scheme, and yet so often neglected. Such plants as are chosen for this purpose should be of choice character, as they occupy the most prominent positions in the border.

The border will show off to better advantage if it is backed by a green hedge of Privet or Evergreens. If the border is to line the outer edge of the lawn, never use straight lines, but use gently curving lines as is noticed when plants are growing naturally. The same principle applies when the border is placed in front of shrubbery or on the edge of a woodland. But in the formal garden the straight lines are used, with grass walks or paths between the beds. A trellis covered with an assortment of hardy climbing plants, such as Roses, Clamatis, etc., makes a most effective background, while certain of the dwarfer-growing deciduous flowering shrubs can be used for this purpose to distinct advantage, provided the border be wide enough.

SITUATION OF THE BORDER

In choosing a location for a herbaceous border, a position which is at once well drained and airy will be found the most suitable. If the border is backed by a hedge, care must be taken that the roots of the plants that form the hedge are consistently kept in check to prevent their robbing the perennials of moisture and absorbing the manurial properties intended for the growing plants.

Some of the taller-growing sorts, such as Hollyhocks, Sunflowers, Rudbeckias, Boltonias, Bocconias, etc., are very attractive when planted throughout a shrubbery border, their showy flowers forming a bright contrast with the foliage of the shrubs throughout the summer and fall, when few of the latter are in bloom.

PREPARATION OF THE SOIL

While a fair degree of success can, for a time, be obtained from any fairly good garden soil unaided by a dressing of fertilizer, it will be found to well repay the extra expense if a liberal dressing of well-decayed cow manure be incorporated with the soil. The beds should be dug deep, especially if there is a clay bottom, which should be broken through to give the bed proper drainage and permit deep rooting of the plants, so they will withstand the drought of summer. Nearly all plants in herbaceous borders are gross feeders, and require to be grown in deeply cultivated, well-fertilized ground; in poor soil they are soon affected by drought in summer.

The most healthy trees and plants are those raised in soil where green crops are grown to take the place of manure. By feeding plants with manure weak tissue results, whereas by feeding with mineralized humus the reverse is the case. With ample humus making material in the form of green manuring, and wood ash or granite dust, or ash, burnt earth, gypsum, or lime, applied to the soil, we have for all crops the most perfect and natural plant food. With these facts in mind it will pay to give consideration to the soil where our flower beds are to be located,

even the year before planting is to be attempted. Mustard seed, at the rate of 25 pounds to the acre, sown in the autumn, will in two months produce ample material for supplying organic matter needed by any plant, and this can be plowed or spaded under in the spring before planting. Or Rosen rye, because it stalls more than the common rye, can be used similarly, in fact, it might be the best to use on a clay soil. Grassy turf, particularly clover sod, piled and left to mature for a year or so, and the grassy side turned downwards in forming the pile and preferably resting on an inch of lime to keep slugs away, will, when chopped to pieces with a spade, with the addition of a peck of wood ash, be use, succulent vegetable leaves, such as cauliflower, cabbage, and the like; burned hedge clippings, cabbage stalks, potato haulm and odd wood rubbish, etc., leaves of trees, pea and bean vines and the like, piled and mixed with earth will, when rotted, furnish a compost fertilizer for all flowers, far safer to use than animal manure, whether dug into the soil or as a mulch.

PLANTING

The best time to plant hardy plants is, usually, just when they are emerging into life after their season's rest, when the weather is favorable and the soil in condition. The exception to this rule applies to the very early blooming plants, which start to make root growth in the fall and prepare for their early spring activity. Such plants should be set out in the autumn. Above all things avoid wet planting. Do not make the common mistake of overcrowding; give each plant sufficient room to allow it to develop to its full size. As to a rule which may be followed in planting, this is rather a difficult matter on which to give advice. If all classes were of like habit it would be easy. The nearest approach to a rule which may be followed in planting, at least until one becomes acquainted with his subjects, is to set out plants which grow to a height of two feet or less, 12 inches apart, and space all others to one-half their height when developed. Another rule to follow, which will help to avoid the crowding of the plants and at the same time give the appearance of a natural planting, is to avoid straight lines; set the plants out diagonally. If planted in dry weather, they should be well watered. A cloudy day is the best.

SUMMER CARE

During the growing season careful attention should be given if best results are to be obtained. There is nothing so beneficial as frequent stirring up around the plants, and raking the ground into order again. It allows the air to move more freely thru the surface of the soil, thereby encouraging growth of the plants, at the same time preventing weeds from getting a start. When the surface soil is kept in a pulverized condition it prevents the sun from drawing out what moisture there may be in the soil, and additional water will not be necessary except in extremely dry summers. During hot, dry weather, give the border a

thorough soaking and then give a mulch of any loose, light material to retain the moisture and keep the soil from baking; short grass, the rakings of the lawn after cutting, is excellent material for this purpose. In applying water, however, it should be used freely each time. Light sprinklings now and then which only wet the surface of the soil are injurious, for they encourage the growth of roots in the surface layer of soil, which will be killed later when the soil becomes dry. Water applied under good pressure will serve to keep many of the insects in check.

All plants having weak stems should be staked to keep them in their natural position. It is hardly possible to stake and tie up a plant so that it will have the same graceful appearance as if grown naturally without this aid; still, supports should be inserted at all tall-growing sorts early in the season while the plants are small. In this way they will lend themselves more naturally to their support than if this work is accomplished after the plants have made considerable growth, for once the plants get broken down or allowed to get "set" it is impossible to tie them up into natural shape again. The stakes should be inconspicuous; cane, painted green, is about the best. During the blooming season remove all the seed-pods, old flowers and diseased leaves. Seed production is very exhausting to a plant. The removal of old flower-stems, not only preserve a neat and tidy appearance, but a great many species respond to this treatment with a second and very often a third crop of flowers during the season. Where the stronger-growing sorts are throwing up a great number of shoots, reduce their quantity without delay, allowing only a sufficient number that will develop properly.

WINTER CARE

About the end of November, or early in December, when all the soft growth has been killed by the frost and the plants are thoroughly ripened, the old stems should be removed and burnt up. It will be found beneficial to cover the plants with a top dressing of loose straw or a covering of leaves—Nature's protection. This covering should be applied when the ground is in a dry condition or has been frozen, never when the soil is warm or wet. The idea is more to keep the heat of the sun from loosening the soil after a freeze, drawing out the plants, than to protect the plants from cold weather. It is well to give only a slight covering, for if they are covered too heavily the protection causes the plants to start into growth too early in the spring, with the result that they are crippled by the late frosts. Two or three inches spread over loosely being all that is required. As the weather begins to moderate, the covering should be removed, but only by degrees; this gives any new growth the plants may have made a chance to harden off gradually. This process usually occupies only a few days, after which the plants may be fully exposed to the full sunshine.

RENOVATING THE GARDEN

It is often stated, and pretty generally supposed, that Hardy Perennials once planted require no attention for several years. The truth is, if we wish them to give entire satisfaction, the collection must be gone over early in October or early in the spring and attention paid to each subject that will insure its fullest development during the next flowering season. In some cases a new scheme of colors may be desired, or new plants to be introduced and room must be made by the removal of old ones. If the work be done in the early fall, while the relative heights and spreads of the various plants can be seen, there is more likelihood of placing them in their proper positions. When single plants or groups have to be replaced, the ground should be deeply dug as far around as possible, without undue disturbing of neighboring plants.

Many ideas are advanced on the question of how often they ought to be divided and transplanted, but no positive rule can be applied. Some sorts will take two or three years or even longer to get established and develop their fullest beauty after being transplanted, and usually the longer they are allowed to grow without disturbance the better results will be accomplished, while others should be transplanted or reset each season. Most hardy plants which flower during the spring or early summer months, such as Anthericum, Peony, Doronicum, Dielytras, etc., produce their new growth from the crown of close, compact roots, and are better if left undivided and undisturbed for several years, the only care necessary for these being a liberal covering with fresh soil or compost early in spring. The late summer and autumn blooming species are usually of a more vigorous growth. Such sorts as Helianthus, Rudbeckias, Asters, Boltonias, Physostegias, Chrysanthemums, etc., of which the original crown dies out each season and many new side growths are made, are far better if replanted each season, selecting from three to five of the strongest growths, which, after the ground has been redug and enriched, may be reset in the same position or replanted to another section of the garden. Treated in this manner, they will not only produce flowers of larger size and finer colors, but will keep the stronger and more rampant growing varieties from crowding out their equally interesting but less vigorous neighbors.

INSECTS AND DISEASES

The man or woman who loves flowers seldom meets with trouble in this direction for they watch carefully the young plants and do not allow trouble to get ahead of them. If the foregoing directions are followed they will help to prevent diseases and keep away insects. Space will not permit us going extensively into details on this subject, but we will say that the most troublesome insect pest is likely to be the aphid or plant lice. These little plant-suckers will be found on the tender, new growth of the plant or under the leaves and can easily be overlooked. A frequent spraying of a nicotine solution will keep them in check. They are white, green or black in color.

FOUNTAINS AND POOLS

The fountain need not be confined to the possession of the large estate owner alone, for a garden is really uncomplete without a fountain or water pool. The fountain may be just an inch pipe, conducted underground to a convenient spot where a pool can easily be constructed of concrete. In many places the pool should not be the conventional circular pool, but the border should be irregular and covered with a naturalistic planting. Fountains may be of the gurgly, squirty or spray sort; all are pretty. To some the squirty sort have an air of impatience or nervousness which makes them only useful at some distance from the garden seat. On the other hand, certain fountains give a restful, cool aspect to the garden which is greatly enjoyed. There seems a universal enjoyment of water. Here the birds come, here plants may be grown, and here goldfish may be kept and, being fed at a certain time each day, become tame enough to take food from the hand.

HARDY PLANTS MOST SUITABLE FOR CUT-FLOWERS

Achillea, The Pearl	Helianthus
Anemone	Iris
Aquilegia, Long Spurred sorts	Lilium
Campanula persicifolia	Lupinus polyphyllus
Chrysanthemum	Paeonia
Coreopsis lanceolata	Papaver
Delphinium	Rudbeckia
Gaillardia	Statice, Limonium latifolium
Gypsophila paniculata	Thalictrum
Heleniums	Veronica
	Kniphofia (usually listed as Tritoma)

PERENNIALS MAKING LAVISH DISPLAY

Anemone japonica	Iris
Chrysanthemum	Kniphofia
Delphinium	Lilium Henryi
Dicentra spectabilis	Lilium speciosum
Dictamnus albus	Lilium tigrinum
Digitalis purpurea	Paeonia
Helianthus GOLDEN THINLEAF	Papaver orientale
Hemerocallis flava	Phlox paniculata
Hibiscus moscheutos	Sedum spectabile
	Yucca filamentosa

Catalog of Perennials

This catalog includes both the scientific and the common names, approved and synonymous, of hardy garden plants in American commerce, as cataloged in the "Standardized Plant Names" 1923, by the American Joint Committee on Horticultural Nomenclature.

Explanation:—

BOLD-FACE capitals indicates the genera group.

bold-face small letters indicates the species.

CAPITALS indicates the Horticultural varieties of the genera or species.

BOLD-face, whether capitals or small letters, indicates approved scientific names.

ITALICS, whether capitals or *small letters*, indicates synonyms or unapproved names.

SMALL CAPITALS indicate approved common names.

The letter and numerals preceding the variety description is the catalog number, for future reference, saving time. The first set of numerals following description refers to the height of the plant. The second set of numerals refers to the months of blooming.

ACHILLEA

YARROW

Named after Achilles, the Greek hero, who was said to have first discovered its medicinal qualities.

These plants grow freely in all soils; dwarf species making thick carpets for dry, sunny places or rockwork, while the tall forms are valuable for wild gardening and borders. All increase rapidly from creeping root-stocks and quickly form a dense sod. The leaves of most sorts are finely cut, often silvery or hoary, with a myrrh-like fragrance. The blossoms grow upon long, slender stems in dense, flattened clusters, keeping up a continual cheery shine of color all summer. The tall white-flowered species are admirable for cutting, as they bloom so prodigally and their branching clusters of dainty blossoms give grace and harmony even to faulty arrangements in the vase or bouquet.

- P6 PINK YARROW. (*millefolium rosea*). Neat, finely cut, deep green foliage; beautiful rose-red flowers in flat corymbs. 18 in. 6-8
- P8 PEARL. Blooms freely with showy clusters of pure white flowers. Valuable for cutting. 2 ft. 7-8

ALTHAEA rosea**HOLLYHOCK**

From Greek, to cure, in allusion to the medicinal qualities of some of the species.

The Hollyhocks are among the very finest of old hardy garden plants, their majestic, stately flower-like spikes make them a prominent feature during July and August and sometimes throwing up young shoots to bloom until frost. Like the Poppy, they give an Oriental atmosphere to the garden, particularly the variety Joann Barthold. They have the largest flowers and widest range of colors among tall garden plants, combined with vigor, hardiness, noble aspect and stately beauty. They will grow most anywhere; doubly well with deep cultivation and when liberally fertilized and watered during dry weather. The plants grow from 4 to 8 feet high, with funnel-shaped flowers measuring 3 to 5 inches across. In the double varieties the flowers are rosette shaped and in the semi-double, the flowers have a few tufted petals in the center, of an otherwise single flower. While the single-flowered varieties are accounted hardiest and most artistic, the double sorts last longer. Both are admirable as a background for tall borders, or to obstruct a disagreeable view, such as an outbuilding. To exhibit the most striking effect they should be planted in long rows. They should also find a place interspersed with shrubbery, as clumps on the lawn or in the mixed border, where their colossal spikes of bloom produce bold and showy effects, which cannot be secured with any other flowering plant. When the last bud has died the stalks should be cut down to about 10 inches from the ground. This treatment will force new leaf growth from the surface of the soil, preventing rot or decay during the winter months and insure a healthy plant to start the following spring. Treated in this manner the plants will last for years. In localities where rust infests old plants, frequent renewal is necessary. Spraying the plants while young, with a weak solution of permanganate of potash or Bordeaux mixture is a preventative. However, we have never sprayed nor seen a case of rust among the plants at Orchadotte, where this flower is a specialty and thousands of seedlings grown each year, the best of which are here mentioned. Other varieties will be listed in future issues of this guide.

- H1 JOHN BARTHOLD. Carmine red with prominent veins of same color, blending to ox-blood red at center; cream color eye. Flowers 5 inches across and well-placed on stiff stalks from 8 to 10 feet tall. The flowers are single, with good luster and have attractive aster purple stamens. The best red we have ever seen and attracts attention at a distance. The mother plant is now ten years old and has never been moved.

- H2 ROSOLANE. Rosolane pink shading lighter to outer edge. Large, single flowers with aster purple center and small eye. Mother plant is eight years old and grows 8 feet tall each year. The best pink of the darker shades.

ANCHUSA

BUGLOSS

From anchusa—paint for the skin; referring to the use of the plant.

Very pretty hardy perennials, with flowers in racemes. Of easy cultivation and preferring a sunny position. Ideal subjects for the border and a favorite of the honey bee.

- P63 *italica*: DROPMORE BUGLOSS. Strong, vigorous plant, almost covered with gentian blue flowers in long spikes, somewhat like the Larkspur. Very effective either in solid beds or in the hardy border. 3-5 5-6

ANEMONE

From anemos—wind; the greater number of the species grow in elevated places where they are much exposed to the wind.

The Anemones divide themselves into Alpine varieties, which bloom in the spring and summer; and the Japanese varieties, which bloom in the fall. We will here dwell only on the Japanese varieties. These gorgeous flowers, resembling a dainty, single rose, are among the most important hardy plants. They are excellent for cutting, being especially valuable for this purpose, as they bloom from August until late in the fall when flowers are not plentiful. They should be planted in the spring for best results.

- P71 ELEGANTISSIMA. Semi-double flowers of a delicate satiny rose. 4 ft. 9-10
- P72 GEANTE DES BLANCHES. One of the largest and best of the whites, on long, strong stems for cutting. 3 ft. 9-10
- P73 KREIMHILDE. Semi-double flowers, nearly four inches in diameter, composed of long, narrow, closely set petals of a lovely rose-pink color. 2-3 9-10
- P75 MONT ROSE. A very pretty form bearing semi-double pink flowers. 3
- P76 PRINCE HEINRICH. Large, delicate, day-break pink flowers of great substance and perfect form; stems stout and erect. A lovely variety, prized for cutting. 3

- P77 QUEEN CHARLOTTE. Semi-double; La France pink; good for cutting. 2-3 9-10
- P79 RUBRA. Beautiful rosy-red; stamens bright yellow. 2
- P80 WHIRLWIND. (*japonica alba*). Bearing large snow-white flowers with double row of ray florets supported by large dark green leafy bracts. 3

ANTHEMIS

CAMOMILE

From Greek, anthemom—a flower; referring to their extreme profuseness of bloom.

Daisy-like, pleasantly fragrant plants, with many flowered heads of golden centered flowers. They have a great endurance of heat, drought, cold and other untoward conditions. They form mounds of delicate, feathery foliage and are beautiful, even when flowerless. They are very desirable because of their continuous profuse blooming throughout the summer. Cutting the plant back after blooming will retain a fresh green plant and prevent seed dropping and over-crowding the plants.

- P93 KELWAY C. (*tinctoria kelwayi*). Deep yellow flowers. 2 6-9
- P92 PALE C. (*tinctoria pallida*). Creamy white, with yellow center. 2 6-9
- P91 WHITE-RIM C. (*tinctoria alba*). Pure white with yellow center. 2 6-9

AQUILEGIA

COLUMBINE

From aquilgeus—water drawer; referring to its fondness for moist places.

This is an especially attractive and picturesque family of plants, combining elegance of foliage and habit, with delicately or vividly bright colors in blossoms of bird-like poise and piquant shape. Humming birds hover persistently over these curious little "fluted cups and horns of honey." Collectors of the best varieties of a handsome plant race will find this one unusually interesting. They are not particular as to soil or location, therefore can be planted wherever their presence will serve to lighten up a stiff and formal planting. Effectively adopted for cut flowers.

- P101 *caerulea*. COLORADO COLUMBINE. The state flower of Colorado. Several flowers on a stem; blue and white, sometimes tinted with lilac or claret; spur very slender, green-tipped. Very lovely for border or base of rockery. 9-15 in. 4-7

- P98 **canadensis**. AMERICAN COLUMBINE. Native, bright red and yellow variety. One of the earliest to bloom. Styles and stamens much protruding. 1-2 4-6
- P101. **chrysantha**. GOLDEN COLUMBINE. Sepals primrose yellow, spreading horizontally in full expansion, tinted claret at tip; limb of petals deeper yellow; spur long, straight and slender. One of the finest. 3-4 5-8
- P106 LONG-SPURRED HYBRIDS. A most admired type of Columbine. The flowers are large size and vary in color thru charming tones of cream, pink, lavender, blue, red, white, etc., hardly any two being exactly alike. 3-4 5-7

ASTER

From aster—a star; referring to the general shape of the flower heads.

These lovely, fall-flowering subjects, which are mostly natives of North America, form a prominent part in the color scheme of our glorious American autumn. They deserve much more extensive culture. There are many species which are widely distinct from each other in habit and form. The Asters have been more highly appreciated in Europe than here in America and many improvements have been made by European growers, producing many hybrid forms by their crossing the different species. With few exceptions, these are all single flowered and must not be confused with the florists' annual, large-flowered, double China Aster.

The principal species in cultivation are:

- amellus.** (*albus*). ITALIAN ASTER. Natives of Europe and Asia; blooming in August and September, distinguished by their soft, velvety foliage, medium dwarf habit, and very large flowers produced singly or in clusters, in shades of blue, purple and rose.
- cordifolius.** BLUE WOOD ASTER, has a dense tuft of large, heart-shaped, smooth leaves, from which arise long, graceful, many-branched sprays densely smothered with small flowers of white, rose, blue, and lavender, mostly blooming in September.
- ericoides.** HEATH ASTER, has bright green, fine, heath-like foliage, with masses of small flowers in white, pale rose, and lavender.
- novae-angliae.** NEW ENGLAND ASTER is a tall New England Aster, with rough foliage, growing to a height of 4 to 5 feet, densely covered with masses of large roses, blue, or purple flowers.

novibelgi. New York Aster, from which has been produced the largest number of varieties, has smooth, dark green foliage, with slender, much-branched stems, smothered with large flowers in shades of white, rose-pink, blue and violet, blooming thru September and October.

The **amellus**, **cordifolius**, and the dwarfer **novibelgi** varieties deserve a prominent place in every hardy border, while the taller varieties may be used as a background; but it is in the open, planted in mass, that they are most useful. Naturalized along drives, shrubbery borders, woodland and meadows, most beautiful color effects may be obtained by their use, combined with Rudbeckias, hardy sunflowers, etc. The Asters are of the easiest cultivation, succeeding in almost any soil or situation. The **amellus**, **ericoides** and **novae-angliae** types do best in open, sunny, dry situations; while the **cordifolius** and **novibelgi** types may be grown in partial shade in most situations. For the best results they should be divided every third year. Plant in the spring.

- A 1 **acris.** Beautiful lavender-blue flowers produced in great profusion, of fine bush habit. 2
- A18 **alpinus.** ROCK ASTER. Indispensable for the rockery or edge of hardy border; large showy, bluish-purple flowers. 6-10 in. 5-6
- A19 **alpinus albus.** Identical to the above, but with pure white flowers.
- A4 **amellus major.** Dark violet-blue flowers borne on loose spreading branches. 2 8-9
- A3 **amethystinus.** AMETHYST ASTER. A much-branded species, with small, lovely amethyst-blue flowers. 4-5 10
- A5 **CLIMAX.** One of the best and showiest, with large pyramidal spikes of large, lavender-blue flowers. The flowers are 2 in. in diameter and are of an exquisite and conspicuous shade with full golden yellow centers. Very free. 3 9-10
- A6 **FELTHAM BLUE.** Strong grower. Large, clear, deep blue flowers, 1 inch across, with prominent yellow center. Very free and showy. 2½ ft. 9
- A24 **GLORY OF COLWALL.** Good sized, semi-double, ageratum-blue flowers; 1 inch across; prominent center; very attractive. 2½
- A7 **LIL FARDELL.** Of recent introduction. Rich, clear, lilac-pink flowers. 4 9-10
- A22 **MAGGIE PERRY.** Very large flowers, frequently 2½ inches across, loosely arranged in large trusses of a pleasing tone of soft mauve. Most distinct and striking novelty.
- A11 **MRS. F. J. RAYNOR.** Large deep crimson flowers. 4-5

- A15 *novae-angliae*. NEW ENGLAND ASTER. Immense heads of deepest clear purple flowers with yellow centers.
- A23 *novae-angliae roseus*. ROSY NEW ENGLAND ASTER. Small reddish pink flowers with large yellow center.
- A16 PERRY'S WHITE. One of the finest white yet introduced. Perfect in habit and remarkably free flowering. The stout stems are well branched and covered with flowers with golden centers. 2½ inches across.
- A8 PEGGY BALLARD. One of the finest Asters recently introduced. Its rosy lilac flowers are quite double for many days, then they pass to semi-double, with golden anthers. The flowers are borne on fine stiff stems.
- A13 ROBERT PARKER. Large sprays of beautiful, large, soft lavender-blue flowers with yellow centers; extra fine. Valuable as a cut-flower. 4-5
- A9 ST. EGWIN. The best of the large soft pink flowered sorts of recent introduction. Forms a compact symmetrical bush which is entirely covered with large clear pink flowers. 2½ 9
- A14 SNOWFLAKE. Pure snow-white; very free. 18 in.
- A17 *subcaeruleus*. INDIA ASTER. Forms a dense tuft of leaves, from which issue many leafless stems 12 inches high bearing massive bluish-violet flowers 3 inches in diameter. 6-7
- A12 *tataricus*. TATARIAN ASTER. A distinct species with large bluish-violet flowers; very late. 5-6 10
- A25 THE QUEEN. Large white, free flowering variety with broad petals and dark yellow center. 2 9
- A10 WHITE CLIMAX. Pure white flowers 2 inches in diameter, with golden yellow centers. 4-5 9-10

BOLTONIA

Named after James Bolton, an English professor of Botany.

Among the showiest of our native hardy perennials; with large, single Aster-like flowers, producing a very showy effect, with its thousands of flowers open at one time, during the summer and autumn months. Fine for mass planting.

- P195 *asteroides*. WHITE BOLTONIA. Pure white starry flower heads; very attractive. 5-7
- P196 *latisquama*. VIOLET BOLTONIA. Flowers large, of a pink to lavender shade. 4-6 8

BUDDELIA

BUTTERFLYBUSH

Named after Adam Buddle, whose collection of dried British plants is preserved in the British Museum.

Chinese perennial with panicles of showy and fragrant flowers, in appearance somewhat like Lilacs; in fact, it is often listed among shrubs as Summer Lilac. It has no rival; nothing with even similar characteristics; is virtually necessary to every garden where flowers from mid-summer on, and a medium size bush are desired. No permanent plant gives such a quick and profuse display of lovely flowers, and for so little expenditure. The flowers of singular beauty—violet or lilac color with orange eyes, and exquisite scent—are like the lilac in clustered spikes from six to twelve or more inches long, well adapted for bouquets, and long lasting. The growth is well-clothed—but not heavily—with long, pointed leaves, developing a good size, gracefully-arching bush, three to five feet high the first season, and spreading two to three feet. The effect is charmingly artistic. The plant dies down to the ground, like other herbaceous perennials, but leaves the hard-wooded stems which sometimes leaf out the following spring. This spoils the effect of the bush, so these dead tops should be severely pruned each year in early spring. The plant will make a stronger and healthier growth for this treatment. A fairly rich soil, sunny position and abundance of water are the essentials for their successful culture.

P199 **davidi.** (*variabilis*). ORANGE-EYE BUTTERFLYBUSH.

The flowers are violet-purple, or lilac in both shape and color, except that they are smaller in size—with orange yellow throat markings. Especially fine for cutting.

4-5 7-9

P200 **OXEYE BUTTERFLYBUSH.** (*magnifica*) The individual flowers are intense violet-purple in color with reflexed margins and orange eye.

P201 **VEITCH BUTTERFLYBUSH.** (*veitchi*). Flower spikes eighteen or twenty inches long, three inches across; flowers violet-mauve with yellow eye. 8-9

CAMPANULA

BELLFLOWER

From Latin, a little bell, referring to the shape of the flowers.

A most important class of hardy plants and among the showiest and most effective subjects of the garden, whether planted in clumps of a few plants or in great masses. Their blooming, which can be prolonged by pinching out the flowers as soon as they fade, usually lasts from four to five weeks. They are of easy culture, growing either in sunny or shady positions; the tall forms should be used for flower borders or shrubberies, and the dwarf forms are charming as edging or rock plants. They are valuable for cut-flowers.

- P214 **medium.** CANTERBURY-BELLS. Beautiful, large, bell-shaped blossoms in panicles. Can be supplied in blue, pink and white. 3 6-7
- P216 **persicifolia.** PEACHLEAF BELLFLOWER. An abundance of large, deep blue, salver-shaped flowers. 2 6-7
- P215 CUP-AND-SAUCER BELLFLOWER. (*Medium calycanthema*). This is the finest type of this old-fashioned and much-prized garden plant, differing from the single type in having an extra calyx, the same color as the flower, giving the appearance of a cup and saucer. They are effective either in the garden or grown in pots for conservatory or table decoration. Can be had in blue, pink or white flowers. 3 6-7
- P217 MOERHEIM BELLFLOWER. (*persicifolia moerheimi* or *alba*). A pure white form of *persicifolia*. 2 6-7

CHRYSANTHEMUM (PYRETHRUM)

From Greek. Chrysos—gold, and anthemone—a flower.

This is a very large family of plants, but we are only interested here in the Hardy Garden Section of the species **hortorum** or COMMON CHRYSANTHEMUM. The varieties here described are all hardy garden varieties. These are so popular and well-known—as a class—for their lavish bloom and exceeding decorative value, that no further introduction seems necessary. The wonderful improvements in this old garden favorite during the past few years have made it the most popular and important of the later blooming perennials. They are now universally popular for outdoor bedding and produce a lavish profusion of blooms, giving color, life and beauty to the garden just at a time when other plants have been destroyed by frost and are looking their worst. Frost does not materially affect the flowering, but may spoil the form or color of the later varieties in latitudes above Philadelphia, where the early blooming sorts should be planted. Blooms may be saved, however, if the protection of a cloth frame is given during the frosty nights. The frame, of course, should be removed during the day time. They are indispensable where cut-flowers are wanted in the late fall, as it frequently happens that an armful of flowers can be cut late in November. They can also be grown as pot plants and have often been displayed at flower shows in this manner with great success.

The single and semi-double Chrysanthemums have rapidly gained in popularity. There are very good reasons for this. They are very free in bloom, and are noted for their ease of culture. The color range here is great. Some have but a single row of petals, flowers being small to

very large. Some have from two to several rows of petals, while others are semi-double. The latter being particularly beautiful when incurved, resembling beautiful Water-lilies.

CULTURAL NOTES

Time to Plant

The best time to plant is during May. Young plants out of 2½ in. pots can be depended upon to produce fine blooming plants by fall. Plants three or four years old, unless still healthy and full of vigor, should be replaced by new pot plants.

Location

Altho Chrysanthemums will grow almost anywhere, except in deepest shade, the best location is one protected from the burning afternoon sun, open to the air and the beneficial morning sun, and protected from cold and drying northwest winds.

Soil

The best soil is one that is loose and friable, but well enriched with one of the good commercial humus preparations or manural compost as described on page 6. As Chrysanthemum roots are shallow and spreading, strive to have a warm soil that will retain moisture.

Fertilizing

After the plants have started an active, healthy growth fertilize with weekly applications of liquid manure made as follows: Using a watering can, with the rose spray removed, put in two or three cups of pulverized sheep manure and add water to fill the can. When well mixed, keeping the mixture well stirred, pour around the plants, after the soil has first been well watered. This watering the soil first, will allow the liquid fertilizer to enter the soil immediately, carrying all its strength. Feeding should be discontinued when the buds show color.

Cultivation

Cultivate as often as necessary to prevent a crust forming around the plants. A mulch of lawn clippings or leaves will help prevent the formation of crust, retain moisture, and keep down weeds.

Pruning

If starting with young plants, they should be pruned when about six inches in height, to force them into a bushy growth. As one pruning will produce from three to six stems, be guided by your desired results, before again pruning.

Insects

The two most destructive insects are a gray winged, woolly-like insect known by the name of *Corythuse Gossypi*, which feeds altogether on the under side of the leaf; and the black and green

aphis, commonly called plant lice, which feeds generally on the new and tender growth of the new stems. The first mentioned insect can be exterminated by spraying with a weak solution of kerosene emulsion, making sure that the spray actually gets to the under side of the leaves. Repeat this spraying every few days until no more of the insects can be found. The aphid can be controlled by spraying about once a week with nicotine sulphate "Black Leaf 40." Spraying must cease when the buds are opening, else the bloom will be spoiled.

Diseases

Little trouble with diseases will be had if the foregoing directions are followed and too much rank manure is not used in fertilizing. It is the use of rank manure, containing rotting vegetable matter, in the planting soil or to rotting stems, leaves and roots of old plants that cause stem rot of Chrysanthemums.

Wintering

The only winter protection necessary to the general run of Hardy Chrysanthemums is a light covering of leaves or straw, this being put on after the ground has frozen hard. If the plants do freeze out in your locality, which the French varieties are likely to do, dig the plants, after blooming, and winter over in a cold frame or an unheated cellar, covering the roots with soil and a layer of leaves.

General List of Varieties

Classification

An. Anemone	Inc. Incurved
Ast. Aster	Lg. Fl. Large-flowered
But. Button	Pom. Pompon
Dec. Decorative	Sin. Single

- M69 A. BARHAM. Dec. A beautiful orange bronze and the first variety of this color to come into flower. Shows up wonderfully well under light when used as a decoration. Blooms in Sept.
- M1 **arcticum.** ARTIC. The absolutely pure white flowers are as white as the driven snow; very beautiful in its purity. Flowers are of good size and fine form.
- M36 AUTUMN BEAUTY. Dec. Golden Brown.
- M45 BABY. But. Its decidedly charming, rounded, double quilled, golden-yellow flowers are quite miniature on sprays carrying from 6 to 18 flowers. 1 ft.
- M58 BETSY PRESBY. Quilled petals; orange-yellow; pretty and free.
- M19 BROWN BESSIE. Pom. A fine mahogany brown; miniature flowered and dependable bloomers.

- M25 BRUNE POITEVINE. Dec. Finely formed, massive flowers of a deep velvety glowing crimson, overlaid gold; much more brilliant than L'Argentuilais. It is very brilliant and free and of medium height. It can be made to produce very large blooms by disbudding.
- M11 CARRIE. Dec. *syn. Goldie and Glory of Seven Oaks.* This variety is just as early as Normandie, but not quite as hardy, but will pull thru in a sheltered location or in sandy soil, if given protection. The color is a most wonderfully attractive golden yellow and the flowers are borne on strong stems, but rather dwarf in habit. It is very effective when used as an edging to a bed of Evergreens. It is continually blooming from August thru late fall and developing large sprays; or if disbudded will produce flowers from 4 to 6 inches across.
- M26 CLARA. A beautiful semi-double; very free flowering white of fairly large size. Medium tall in height.
- M52 CRANFORDIA. Dec. In this variety we have an early point; perfect in flower and stem; foliage up to the flower and every plant will carry twelve to twenty beautiful finished flowers. Strongly recommended to grow in large blocks for cutting, as it will fill all requirements. The color is a deep bronzy-yellow.
- M44 DONALD. Pom. Light pink; very fine grower, large and sturdy; flowering in a sheltered situation up to Thanksgiving.
- M53 ETHEL BLADES. Dec. Very large flowers of a rich chestnut red; one of the best early flowering sorts.
- M16 EVA. Delicate pink, very early.
- M63 FAIRY QUEEN. Pom. A clear pink of reflexed form and produced in fine sprays. It is of dwarf to medium growth and medium early; elegant foliage and a good keeper.
- M54 FEE PARISIENNE. Ast. An early flowering deep rose.
- M33 GARZA. An. A very large, late, pure white.
- M40 GOLDEN CLIMAX. Pom. Orange yellow. About the finest of the many yellows now in cultivation, possessing every necessary qualification. It does not seem possible to improve on this variety.
- M72 GOLDEN GLOW. Inc. A large flowering, bright yellow with good stem and foliage. Early bloomer and a greenhouse favorite on that account.
- M51 HOMESTEAD. A very beautiful salmon-mauve-pink; extra fine under artificial light; very hardy; strong grower and free bloomer.
- M7 INDIAN. Lg. Fl. Indian red; much admired at flower shows under artificial light; hardy, strong grower and free bloomer.

- M24 IRENE CRAGG. Sin. A beautiful white, medium in height, produced in fine sprays without disbudding, and has but a single row of petals which are slightly quilled near the center but otherwise open flat. Disbudded, the flowers are much improved in size and form.
- M43 IVA. Pom. Very small deep bronze.
- M64 JOSEPHINE. Sin. A splendid, very large yellow of exceptional merit; flower is heavy in texture, foot-stalk perfectly stiff and when disbudded will produce flowers about six inches across.
- M61 LA GARONNE. Dec. Lemon yellow suffused bronze. Unique and attractive.
- M37 L'ARGENTUILLIS. Dec. A tried and true very beautiful chestnut red, overlaid with yellow, so suitable for autumn decorations. Just as reliable as Normandie and in a class by itself among the early reds; coming into flower early in October.
- M67 LELIA. Pom. Splendid scarlet bronze in color; tall, handsome flower, quite large in size.
- M31 LILLIAN DOTY. Pom. The finest pink in the large flowering section of the Pompon family. A strong, vigorous, tall grower and producing beautiful sprays of beautiful formed, incurved, clear, light pink flowers. Extra fine and an early bloomer.
- M23 LIZZIE. But. A beautiful bronze colored Pompon, originated by the U. S. Dept. of Agriculture; of the button type but fairly large; medium in height.
- M22 LOUISE. Sin. A variety with several rows of petals, flowers produced in close sprays. It is medium dwarf growth, large foliage and its flowers are a light salmon pink shaded with yellow. Excellent for cutting.
- M10 MATURING SUN. Dec. Color is a beautiful bronze, tipped red; a very beautiful sort; large flowers; strong grower and free bloomer.
- M27 MINTA. Pom. A free flowering light pink of upright growth. Best of this color.
- M66 MISS MARY POPE. Sin. An early pale pink with a very large flower. One of the best.
- M35 MRS. CHESTER ROBINSON. Pom. A large, deep rose pink.
- M21 MRS. E. D. GODFREY. Sin. Light pink; very strong grower and more largely grown than any other single.
- M38 MRS. HENRY F. VINCENT. Pom. A fine shade of fawn and bronze, with salmon-pink shading. An exquisite combination.
- M34 MRS. NELLIE KLERIS. Pom. An improved Lillian Doty, but the color is more evenly diffused over the flower. A fine incurved clear pink; dwarf grower.

- M70 MRS. W. E. BUCKINGHAM. Sin. A mid-season pink that has proved itself one of the best varieties for cutting ever introduced. The flowers are extra large, flat and of a rosy-pink.
- M56 MYER'S PERFECTION. Pom. A very large, sulphur white with a yellow cushion; early and belong to the Anemone pompon class.
- M71 NELLIE IRWIN. Pom. A true pompon; clear bright yellow; fine clean foliage and stiff stems.
- M2 NORMANDIE. Dec. Very early; delicately beautiful and hard to beat. It is an extra fine delicate pink of medium height coming into flower in August. It is the standard by which all earlies are judged and is in a class by itself as regards hardiness, strong growth and free blooming qualities.
- M30 OCONTO. Lg. Fl. A Japanese variety with fine large white flowers on very strong stems. Early.
- M65 PROVENCE. Ast. Pale pink.
- M13 PINK DANDY. Pom. About the hardiest of all. A beautiful shade of clear pink which becomes tinted with deep rose or purple when touched by frost. Free bloomer and a gorgeous sight if protected where there is early frost. About 2 ft. and blooms in October.
- M50 QUAKER LADY. Sin. Comes into bloom right after midseason; is a very beautiful bronze, flushed pink; strong growth; self supporting; free bloomer and as hardy as Pink Dandy. A valuable variety.
- M29 QUEEN OF THE WHITES. Pom. A very fine, creamy white; best in its color; late bloomer.
- M20 TINTS OF GOLD. Dec. A very beautiful extra large, rich bronzy yellow, making a wonderful glowing bush if not disbudded for extra size flowers. When disbudded it will produce blooms as large as those grown in the greenhouse.
- M73 UNAKA. Inc. Owing to large size and early flowering, this is one of the foremost pinks.
- M29 WHITE DOTY. Pom. A sport of the popular variety Lillian Doty; identical in every way except color, which is a pure white. The flowers are lovely, rounded, short petaled; medium size. It is tall in habit and flowering in beautiful sprays.

Other Types of Chrysanthemum

- M210 *coccineum*. (*roseum*; *Pyrethrum hybridum*; *P. carneum*; *P. roseum*). PAINTED LADY. This popular perennial is usually listed in catalogs under Pyrethrum, but truly belongs to the large and varied family of Chrysanthemum.

mums. The name *Pyrethrum* is probably taken from the Greek, *Pyr*—fire; referring to the acid roots of this species, which are dried and used in powdered form to exterminate insects. Whoever has once seen the beautifully colored and beautifully formed flowers of this daisy, will easily understand why they are considered so highly and made so much of among hardy garden plants, and why we are striving to perfect varieties in form and color. This grand old-fashioned hardy perennial is easy to grow in any good garden soil where there is good drainage and full exposure to the sun and is probably the best of all for general decoration of the flower garden. Their pretty fern-like foliage in spring, followed by the profusion of handsome double or graceful, brilliant, single blooms in early summer, which are unequalled as cut-flowers, deservedly make them vast favorites. They have an extensive color range, from white to crimson and are most beautifully formed. They prefer to be left undisturbed for two or three years, and if given an annual top dressing of leaf mould and fertilizer, flower generously. Their main season of blooming is in June, but if the first crop of flower stems is removed as soon as the bloom has faded they will often give a fair sprinkling of flowers during the summer and autumn months. As heavy rains often lay these plants flat, spreading them out and exposing the center of the clump, we suggest that supports be put around each plant. These supports can be easily made of 12-inch wide poultry netting, cut in lengths to make a circular fence around the plant, then staked to the soil in three or more places with hooks made of heavy wire and bent like a hair pin. These supports if painted green will not be conspicuous and last a long time. For house decoration, there is almost nothing so artistic and attractive as a vase of these single flowers, with a little foliage. They also mix nicely in bouquets of Peony blooms, which are in bloom at the same time.

1-3 5-6

M200 maximum. PYRENEES CHRYSANTHEMUM.

SHASTA DAISY. Several named varieties of this Daisy have been tested at Orchadotte and as the difference found was so slight, the most perfect individual specimens were selected for further propagation and the various variety names, which would only cause confusion, have been dropped. This collection of hybrids now give large, snow-white, daisy flowers with the usual yellow center. Some have broad, overlapping petals; some quilled petals and others perfectly formed petals, well separated at the

tips. They are all large flowered, 4 inches being a common diameter. They grow about 2 ft. tall and bloom nearly all summer, especially if the dying blooms are cut off. They are excellent as cut-flowers and last in water for some time. 2 6-8

- M201 **uliginosum.** (*Pyrethrum uliginosum*). GIANT DAISY. A very bold and strong-growing plant of the *Pyrethrum* species, having a handsome and distinct appearance when covered with a profusion of its white daisy-like blossoms, sometimes 3 inches in diameter. Perfectly hardy but prefers a sheltered position. 3-5 7-9

CONVALLARIA

LILY-OF-THE-VALLEY

From Latin, convallis—a valley, and rica—a mantle; in reference to the dense covering formed by the leaves, and its natural habitat.

A dainty herb much prized for its delicate, sweet-scented flowers. Essentially a shade-loving plant and the best to grow in the shaded spot. These popular plants repay for being well treated, and if the bed is given a liberal top-dressing of well-decayed manure in fall or early spring it will show the effect by increased size, number and vigor of the flowers. They should be set out before the end of April or in the early Autumn

- P262 **majalis.** Fragrant, white, bell-shaped flowers in gracefully arching racemes; beautiful, glossy green foliage. 6 in-12 in. 3-5

COREOPSIS

COREOPSIS

From Greek, koris—a bug, and opsis—like; referring to the appearance of the seed.

Valuable border plants because of their profusion of showy, elegant yellow flowers; much prized for cutting. Most hardy and of the easiest culture. The blooming season can be prolonged by keeping the seed pods cut off.

- P264 **lanceolata.** (*Calliopsis lanceolata*). LANCE COREOPSIS. One of the most popular hardy plants. The rich, golden-yellow, cosmos-like blossoms come in profusion from June on thru the entire summer and autumn. It succeeds everywhere. Invaluable for cutting.

2-3 6-9

DELPHINIUM LARKSPUR

From Greek, delphin.—a dolphin; in reference to the resemblance of the flowers to a dolphin.

The stately and beautiful Larkspur is one of the loveliest blue flowers in existence, growing on tall, straight spikes that over-top the rest of the garden and nod gently as the wind sways them. The flowers, with their curious throat markings, remind one most of little blue humming birds, as they flutter above the mat of beautiful dark green leaves that contrast so splendidly with them. They are of the easiest culture, being hardy and preferring sunny, well-drained places. They, however, require copious supplies of water during the summer for best results. A mulch will assist in conserving the moisture in the soil. A succession of flowers can be obtained by cutting the flower spikes to within a few inches of the ground immediately after blooming.

- D1 **DELLADONNA.** The freest and most continuous blooming of all, from June until cut down by hard frost. The clear turquoise-blue flowers are not equalled for delicacy and beauty by any other flower. Undoubtedly the most popular variety of this popular family of plants.
3-5 6-9
- D2 **GOLD MEDAL HYBRIDS.** Extra choice seedlings. The original stock came from England, and consisted of the best named varieties. The plants are of strong, vigorous habit, with large flowers on spikes two feet and over long, the majority running in the lighter shades of blue. In mixed shades only.
3-5 6-9
- D3 **moerheimi. MOERHEIM LARKSPUR.** This is a decided acquisition to the Delphinium family. The plant is of strong, vigorous growth, with lateral or side shoots 2½ feet long. The flowers are of purest white, without the slightest shading; a free and continuous bloomer.
5 6-9

DICENTRA

The name of this genus under the American Rules is Bikukulla. The names Dicytra, Dielytra, Capnorchis, and Bicuculla, used by various authors, are synonyms of Dicentra, the name now recommended by the American Joint Committee on Horticultural Nomenclature.

Charming hardy perennial plants with much-cut foliage and flowers on interesting structure. The Bleeding Heart is one of the choicest members of old-fashioned gardens. They prefer the shaded nooks in the border.

- P305 **spectabilis. BLEEDINGHEART.** An old-fashioned favorite; its long racemes of graceful heart-shaped pink flowers

are always attractive. It is perfectly at home in any part of the hardy garden and especially valuable for planting in the shade. 2 5

DICTAMNUS

GASPLANT

An ancient Greek name supposed to have been given because the leaves resemble that of the Ash tree, whence the English name of Fraxinella.

A genus of very showy and ornamental plants deserving a place in every flower garden. The plant when rubbed, or on warm sultry evenings, exhales a fragrant volatile oil, which ignites when a match is applied to the stem directly under the head of the flowers. The strong, fine odor resembles that of a lemon peel and is strongest in the pedicels of the flowers. They do best in a heavy, strong soil and an open, sunny position. Being one of the most permanent features of the hardy herbaceous garden, as they improve with age, it is not advisable to transplant them often.

- P307 **fraxinella**. Racemes of curious red flowers with decided balsamic scent. 24 in.-30 in. 5-7
- P308 **albus**. (*fraxinella alba*). Spikes of attractive pure white, sweet-scented flowers; valuable for cutting and lasting a long time in water. 2 ft. 5-7

DIGITALIS

FOXGLOVE

From digitale—the finger of a glove; in allusion to the resemblance the flower bears to the finger of a glove.

A fine genus of hardy plants, famous for their long racemes of inflated flowers, which suggest spires or towers of bells. The strong vertical lines of the flowers' stalks, rising above a rich and luxuriant mass of leaves, strengthen the appearance of any hardy garden. Their bloom will usually dominate the whole garden for about two weeks. They are of easy culture and prefer partial shade. To prevent the crowns from towering out, set the plants in little mounds above the surrounding surface of the garden.

- P311 **ambigua**. (*grandiflora*). YELLOW FOXGLOVE. Showy flowers of a pale yellow, veined brown. 3 7
- P130 COMMON WHITE FOXGLOVE. (*purpurea alba*). Flowers pure white without spots or markings. 3 7
- P314 PINK GLOXINA FOXGLOVE. Similar to the purple variety, but lavender-pink flowers. 3 7

- P313 GLOXINIA FOXGLOVE. (*purpurea gloxiniaeflora*). The popular Foxglove, beautiful finely spotted purple flowers. 3 7
- P312 WHITE GLOXINIA FOXGLOVE. Similar to the purple variety, but white flowers.

DORONICUM**LEOPARDBANE**

From Doronigi, the Arabic name.

One of the most effective, very early, spring flowering perennials. The large, yellow, daisy-like blossoms rise on stems direct from the ground leaves. Makes a wonderful effect when planted in a mass or used in a natural planting. They succeed everywhere and should have a place in every garden. Makes a splendid cut-flower, as it carries well and stands a long time in water, opening out morning after morning. For best results, plant in the fall. If placed in pots in the fall they can readily be forced into flower during the winter months.

- P319 **caucasicum**. CAUCASIAN LEOPARDANE. Bright yellow flowers about 2 inches across. A very free bloomer. A good plant for the rock garden. 12 in.-18 in. 4-6

ECHINACEA (BRAUNERIA) HEDGEHOG-CONEFLOWER

From Greek, echinos—a hedgehog; alluding to the prickly scales of the receptacle.

One of the most popular and attractive of the autumn flowering perennials for the mixed garden, and a relative of the Rudbeckia. They are of the easiest culture, perfectly hardy and very free-flowering. The discs of the flowers are raised, forming buttons or cones, giving a unique appearance.

- P633 **purpurea**. (*Rudbeckia purpurea*). The flowers of this variety are of a reddish purple, drooping rays with a large, brown, cone-shaped disk in the center. They last in perfect condition on the plant for three or four weeks after they are fully developed. 3-4 7-9

EUPATORIUM**EUPATORIUM**

Named after Mithradates Eupator, King of Pontus, who discovered one of the species to be an antidote against poison.

Very ornamental, tall growing plants for the hardy garden; always conspicuous when planted in clumps.

- P341 **aromaticum melissoides.** (*fraseri*). MELISSA THOROUGHWORT. This variety is more at home in sandy soil than the other varieties of the family. A very pretty dwarf variety; producing clusters of snow-white flowers; fine for cutting; 18 in. 8
- P340 **coelestinum.** (*Conoclinium coelestinum*). MISTFLOWER. A compact growing plant, with light blue flowers similar to the Ageratum. This variety is usually described as adapted to low borders, but it occasionally grows three or four feet high in spots where it has been established a long time. 2-4 8-9
- P339 **urticaefolium.** (*ageratoides*). SNOW THOROUGHWORT. A useful plant of strong, free growth, with numerous compound heads of minute, pure white flowers; splendid for cutting. The most valuable of the family and a perennial which should not be overlooked by garden makers who seek something which will give a good supply of flowers very late in the season, and which is not particular as to location or soil. It will thrive even under trees, and is particularly useful for combining with more brilliant flowers in making bouquets.

EUPHORBIA

SPURGE

Named after Euphorbus, the physician to Juba, king of Mauretania.

Showy plants for the border, with continuous bloom that is very desirable for cutting.

- P343 **corollata.** FLOWERING SPURGE. A most showy and useful native plant, bearing umbels of pure white flowers, with a small green eye. Desirable for cutting. A very good rockery plant or for the herbaceous border. 18 in. 6-8
- P344 **cyparissias.** CYPRESS SPURGE. Forms neat clumps with Cypress-like foliage, and showy trusses of bright yellow flower-like bracts; very effective even when out of bloom. 12 in. 5

GAILLARDIA

GAILLARDIA

Named after M. Gaillard, a French patron of Botany.

A fine subject for the mixed flower border and an invaluable plant for dry, sunny positions. It is doubly valuable in dry seasons and should be grown largely on this account. The plants should be set out in clumps of three, and the shoots laid out and pegged down, otherwise they present a rather straggling appearance. The flowers are very

useful for decorative purposes and last a long time in water. The handsome blossoms, of a reddish brown with tinges of scarlet, orange and vermilion, add a touch of strong color to the perennial garden such as no other flower will.

- P354 BUSH (*aristata compacta*). A compact variety, forming bushy plants and bearing its long stemmed flowers well above the foliage. The flowers are as rich and varied in coloring as those of the tall growing sort.
12-15 in. 6-8
- P357 YELLOWEDGE. (*kermesina splendens*). Centre rich crimson with narrow canary-yellow border.
2 ft. 6-8

GYPHOPHILA

GYPHOPHILA

From Greek, gypsos—chalk, and philein—to love; in reference to the species preferring a chalky soil.

This well known, indispensable, decorative plant possesses a usefulness and grace, with its cloud-like masses of small white flowers, that make it a favorite everywhere. As a cut-flower and in combination, in a bouquet or spray, with brightly colored flowers, it is very ornamental, with its beautiful gauze-like appearance, as it enhances the beauty of all flowers with which it is combined. Very branchy or spreading, with scant foliage when in bloom. Of easiest culture in open, rather dry places. Desirable where a mass of delicate misty bloom will fill in a bare place.

- P404 **paniculata**. BABYBREATH. The common variety of this beautiful perennial family with small, white, single flowers. When in bloom it forms a symmetrical mass.
2-3 7-8
- P405 **DOUBLE BABYBREATH**. (*paniculata florepleno*). A double flowered variety of the above. Considered, by many, superior to its ancestor.

HELENIUM

SNEEZEWEED

Named after the celebrated Helen of Troy, who is said to have availed herself of the cosmetic properties of the plant named after her.

The Sneezeweeds are among the best of the hardy flowers and can be had in bloom from June to October. They succeed in any soil in a sunny location and are good as specimens in the border; for hiding fences; or for the woodland garden. The broad spreading heads of flowers last a long time when cut, and will prove valuable for decorative purposes

- P408 GREAT. (*H. autumnale superbum*). Clear golden-yellow flowers. 5-6 8-10
- P411 **hoopesi**. ORANGE SNEEZEWEED. The earliest to flower and has bright orange flowers. 2 6-9
- P412 RIVERTON BEAUTY. A very distinct lemon-yellow with a large cone of purplish black, the two colors giving it a very pleasing effect. 4 8-9
- P413 RIVERTON GEM. Old gold, changing to wallflower red. 3 8-9
- P409 **rubrum**. The flowers are a rich terra-cotta. 4 8-10

HELIANTHUS

SUNFLOWER

From the Greek, helios—sun, and anthemion—a flower; from the brilliant color of the flowers and the erroneous idea that the flowers always turned toward the sun.

The perennial Sunflowers are among the most effective hardy plants for large borders; for planting among shrubbery; or as clumps on the lawn. They are remarkably free-flowering; will succeed in any soil or position, and are invaluable for decorative purposes, or as cut-flowers during the summer and autumn.

- P418 **maximiliani**. (*maximilianus*). MAXIMILIAN SUNFLOWER. The latest of all. Fine golden yellow flowers in long, graceful sprays; invaluable for cutting. 5-7 9-10
- P419 SOLEIL D'OR. Perhaps the best of the hardy Sunflowers. Large, double golden flowers, like quilled Dahlias, in great profusion. 4 7-8
- P420 WOLLEY DOD. The best of the September blooming varieties, with deep yellow flowers; entirely distinct. 6-7 9

HELIOPSIS

HELIOPSIS

From the Greek, helios—the sun, and opsis—like; referring to the appearance of the flower.

This genus is very similar in general habit to their near neighbors, the Helianthus, but commence to flower earlier in the season; of dwarfed habit, rarely exceeding three feet in height; very valuable for cutting.

- P426 PITCHER. (*helianthoides pitcheriana*). One of the best hardy plants for the perennial border; being especially valuable for cutting and for planting in dry places. The flowers are Daisy shaped, of a beautiful deep golden-

yellow, about two inches across, of very thick texture and on good stems for cutting.

2-3 7-10

P425 **scabra**. ROUGH HELIOPSIS. Very rich chrome-yellow flowers, turning to a bright yellow as they mature. These are almost double, having from 4 to 5 rows of petals, and are produced very profusely. The plant is of robust growth, and makes an effective display when in bloom.

3 7-8

P427 ZINNIA HELIOPSIS. (*H. scabra zinniaeflora*). A double-flowering form (closely resembling a Zinnia), producing golden-yellow flowers; desirable for cutting.

2

HEMEROCALLIS

DAYLILY

From Greek. hemero—day. and kallos—beautiful; because the beautiful blossoms close at night: some say because the blossom lives only one day.

These popular hardy plants, belonging to the Lily family, will grow anywhere, in either partial shade or full sunshine. They are good for borders, shrubberies or for naturalizing. They like lots of moisture and do well planted on the banks of ponds. They have narrow grass-like foliage, and the flowers have wide funnels. Small plants will flower freely the first year. The plants are remarkably free from enemies and need no protection even in the severest winters. The flowers are very simple, yet distinct, with a wholesome fragrance. While the individual flowers are short-lived, there is a good succession. Excellent for cutting, lasting a long while and the most backward buds opening in the water.

P432 **aurantiaca**. ORANGE DAYLILY. Large, trumpet-shaped, pleasing neutral orange color; tube, stamens and reverse of petals bright Indian yellow; sweet scented.

3-4 6-7

P433 **dumortieri**. (*sieboldi*). EARLY DAYLILY. Rich orange-yellow; buds and reverse of petals bronze-yellow. A splendid free-flowering, dwarf habit.

18 in. 6

P434 **flava**, (*lilio-asphodelus*). LEMON DAYLILY. The best known variety; very fragrant; deep lemon-yellow flowers.

2½-3 6-7

HEUCHERA

ALUMROOT

Named after Jean Henry de Heucher, 1677-1747, professor of Botany and Medicine, at Wittenberg.

Most desirable dwarf, compact, bushy plants of robust constitution and easy culture; having a tuft of heart-shaped leaves from which spring a dozen or so loose, graceful scapes bearing small bell-shaped flowers in panicles, giving a delicate and airy effect; excellent subjects either for the border or rockery and of great value for cutting.

- P446 **sanguinea** CORALBELLS. Bright coral-red flowers.
12-18 in. 6-8
- P447 GRASSLEAF CORALBELLS. (*gracillima*). Perry's Variety. A greatly improved form of this type with flowers of a more brilliant crimson color, arranged in loosely branching, airy panicles. 2½-3 7-9
- P448 SNOWDROP. (*sanguinea alba*). A creamy white variety of *H. sanguinea*. 12 in-18 in. 5-8

HIBISCUS

ROSEMALLOW

Probably derived from ibis—a stork, because the bird is said to eat some of the species.

These are among the most gorgeous of perennials, attracting attention wherever grown. A desirable border plant, succeeding in any sunny position, but doing best in a damp place; large foliage and large, showy flowers of delicate coloring, producing during the entire summer, similar in form to the single Hollyhock, to which it is related. They should have plenty of room to develop properly.

- P458 **occineus**. SCARLET ROSEMALLOW. Large, bright red flowers, 6 to 10 inches in diameter. The choicest of all and attractive at a distance. 5 ft. up 7-9
- P459 **grandiflorous**. GREAT ROSEMALLOW. Large flowers of soft shades of pink. 5 ft. up 7-9
- P457 **moscheutos**. COMMON ROSEMALLOW. Flowers 6 inches in diameter; of a light rosy-red color, with a darker center. 5 ft. up 7-9
- P455 **oculiroseus**. CRIMSON-EYE ROSEMALLOW. Flowers of immense size, of the purest white, with a large spot of deep velvety crimson in the center. A popular variety. 5 ft. up 7-9
- P456 GOLDEN BOWL. Flowers from 6 to 9 inches in diameter; of a rich deep cream, with a velvety-maroon center. A beauty, but not very hardy in the latitude of Philadelphia. 4 ft. 7-8

HOSTA. (*Funkia*; *Niobe* Ag). **PLANTAINLILY**

Named by Sprengel, in honor of Henry Funk, a German cryptogamist and known as Funkia under the old nomenclature.

This class of Japanese perennials are, for the most part, very ornamental and produce attractive clumps of foliage and rather interesting, lily-like flowers. But even when the plants are not in bloom, their dense stools of foliage make a fine effect and are in place along drives or walks and in the angles against buildings. A continuous row along a walk gives a strong and pleasing character. They delight in moist situations, shady situations and the foliage of some species is extremely beautiful and striking for bedding purposes. If you have a shaded spot in your garden which you want to make real attractive, plant some Hostas. But they will succeed equally well in sunny locations. The large leaved kinds are excellent subjects for water-side planting.

- P461 caerulea.** (*Niobe caerulea* Ag; *Funkia caerulea*; *F. lanceolata* *F. ovata*). BLUE PLANTAINLILY. Spikes of nodding light blue flowers; large handsome dark green, glossy foliage. 12 in.-18 in. 5
- P464 plantaginea.** (*N. plantaginea* Ag; *F. alba*; *F. subcordata*). WHITE PLANTAINLILY. This is a perfect gem, with nice, clean cut, green foliage and producing very freely, comparatively large, pure white flowers, suggesting a giant form of the St. Brunolily; fine for cutting. 18 in.-24 in. 7-8
- P465 plantaginea grandiflora.** (*Niobe plantaginea grandiflora* Ag; *Funkia grandiflora*). BIG PLANTAINLILY. Very large, handsome spikes of lily-shaped, fragrant, waxy-white flowers and large, broad, glossy, light green foliage. The fragrance is unlike that of orange blossoms. 1-2 8-9
- P466 sieboldiana.** (*N. sieboldiana* Ag; *F. sieboldiana*). CUSHION PLANTAINLILY. Flowers pale blue; leaves of a metallic blue color.
- P467 GREAT PLANTAINLILY.** (*H. fortunei gigantea*; *F. gigantea*). A strong, vigorous grower with large, lilac-colored flowers; very large, attractive, rich glaucous green foliage. A fine ornamental border plant. 1-2 7-8

IRIS **IRIS**

Ancient Greek, meaning rainbow, because of its beauty and diversity of color. Pliny says it is from the Egyptian word for eye and signifies the eye of heaven.

The Iris takes first rank in diversity of interest, with its one hundred and fifty odd species and varieties innumerable. This flower has justly

been called the "Poor Man's Orchid." The origin of its name is as fanciful as its color. Pliny wrote that "iris" is Egyptian for "eye" and that the name Iris signifies Eye of Heaven. The word "iris" is the Greek for "rainbow." In Grecian mythology Iris, the rainbow personified, was one of the minor goddesses and messenger of the greater divinities, particularly of Juno. The Iris has long been a flower of song. Ever since the early days we find it in the poet's lays.

The name "German" Iris has been commonly but erroneously given to a group of various bearded species scientifically known as **Pogoniris**, more or less resembling each other in foliage, shape of flower, and, generally, in root system, to distinguish it from the Japanese, the Spanish, the English and others. This name, however, is a misnomer, for not one of the species included in the group has ever been known to be native to Germany, but from southern Europe and Asia Minor.

The Iris is extremely beautiful in color and form. The bearded or Pogoniris section particularly, which possesses more qualities of merit than any other out-door plant, has a delicate fragrance enjoyed only by this early Spring flower. It is as hardy as a dandelion, and happy in any good soil not stranger to the sun and good drainage. It increases rapidly and has great decorative value with its clean-cut, strong, erect or gracefully drooping leaves which are broad and sword-like; and huge spikes of bloom, in a wider range of color and color combinations than that of any other flower.

No garden is complete without the Iris, and to acquire the Iris habit is to assume a hobby that can be ridden to the heart's content. Long narrow beds are lovely. With the bearded sorts wonderful gardens may be made even on a hill. Iris gardens are growing more and more a feature of well planted grounds. The Kaempferi or Japanese varieties may be planted to advantage along the banks of your water garden. Do not plant in deep shade. Open woodland paths, if well drained, make admirable locations for broad masses of Iris.

Their Culture

When the plants reach you they will be trimmed and ready for planting. Having dug the ground at least a spade depth, dig a hole a little larger than may be necessary to allow the rootlets to be spread out at full length, and make a mound in the center, with the top a little—about the thickness of the rhizome (main root)—below the level of the surrounding surface. Place the rhizome flat on the mound and after spreading the rootlets in a slanting way downwards over the mound of soil, in order that they may better resist the action of frost, fill the hole, but leave the top of the rhizome on a level with the soil so that the sun can strike it at all times.

Do not use manure. Lime the prepared bed well and give an annual top-dressing of lime in the fall with a top-dressing of bone meal in early spring. But little moisture should be given until growth begins or the

rhizome will be likely to decay. To enrich the soil before planting, if necessary, use the compost recommended in the forepart of this book.

Plant three feet apart and wait for clumps to form. The vacant spaces, until required by the Irises themselves, can be utilized with annuals, and for this purpose nothing is better than *Gladiolus*, which has the same sword-like leaves, and which will be in flower after all the Irises are done. The *Gladioli* themselves will look all the better in such settings because of their sparse foliage.

Iris may be planted at any time the ground is open, but the ideal time is through the months of July, August and September. The new growth starts activity in July and the root quickly establishes itself for blooming next season. Late plantings should be mulched with leaves or straw, not manure, after the ground has frozen, to keep the young plants from being heaved out by thaw actions.

General List of Varieties

To many home-gardeners in America, the word Iris brings up mind-pictures of merely two or three of the most common varieties—kinds that are either native to that particular locality or have become naturalized in the course of time and called Flags. To such flower-lovers we urge a close first-hand acquaintance with as large a number of the magnificent varieties in the following lists as can be accommodated in the planting space available.

The name of the originator and the date of introduction are given in parentheses where these facts have been ascertained. In the description, S is used to designate the standards or upright petals; F, the falls or drooping petals. The capitals following the names are abbreviations of Iris Sections, as:

IB Intermediate Bearded.
JAP Kaempferi.
TB Tall Bearded.

Number following description stands for period of blooming.

- S16 ALBATROSS. TB S. white, shaded pale blue; F. white, veined and tipped rich purple. 3-5
- S13 ALBERT VICTOR. TB (1885) S. soft blue; F. beautiful lavender; large and fine. 40 inches 5
- S17 AMAS. TB (Col. by Foster, 1885). (*Syn. Amasia; Macrantha; William III; William Tell*). S. rich blue; F. violet. 2-3
- S18 ARNOLS. TB (Barr 1874). S. rosy bronze; F. rich velvety purple; handsome. 30 Sn. 5
- S3 AUREA. TB (Jacques, 1830) (*Syn. Aurora; Californica; Canary Bird; Stump; Yellow Perfection; Augustissima; Loie Fuller*). Large flowers of perfect form of the purest yellow. 2 ft. 5

- S19 CAPRICE. TB (Vilmorin, 1904) S. rosy red; F. deeper rosy red; beard yellow. Handsome. 2 ft. 3
- S15 CLARENCE WEDGE. TB (Fry, 1919). S. heliotrope, tinged yellow, with lighter edge; F. purple-red. One half of each fall is shaded darker than the other. Conspicuous orange beard. 5
- S20 CRIMSON KING. TB S. and F. rich claret-purple.
- S2 DALMATICA. TB (Cult. before 1600). *Syn. Pallida dalmatica*; *Mme. Almira*. S. fine silvery lavender; F. clear lavender; flowers large and superb; similar to Albert Victor, which is sometimes mistaken for it; the best known and universally loved Iris. 40 in. 5
- S6 DARIUS. TB (Parker, 173). S. rich canary-yellow; F. lilac, margined white, with rich orange beard. One of the most distinct and beautiful. 20 in.
- S21 DR. BERNICE. TB. (1867). (*Syn. Magnifica* (not Vilmorin); *Dr. Bernie*; *Dr. Berenice*). S. lilac pink, with bronze reflection; F. white, heavily marked with lilac-pink; not so clear in coloring as Her Majesty and Queen of May. 24 in.
- S22 EMPRESS. IB (Caparne, 1901). Extra large cream white bloom, 12 to 15 inches tall; foliage 8 to 12 inches. 2-3
- S39 FAIRY. TB (Kennicott, 1905). White, delicately bordered and suffused soft blue. 2 ft. 3-5
- S23 FLAVESCENS. *Syn. Canary Bird*; *Canari*; *Hortense*. Delicate shade of soft yellow. Large, sweet-scented flowers. Fine for massing and of great value for cutting. 30 in. 5
- S7 FLORENTINA. TB *Syn. Alba odorata*; *Florentine alba*; *Florentina Queen Emma*; *Florentina Silver King*; *Gambetta*; *Florentine*. Creamy white, finely flushed lavender. The flowers are quite fragrant and are produced early in the season. Fine for cutting. 2 ft. 1-2
- S24 FRO. TB (Goos & Koenemann, 1910) S. deep gold; F. brilliant chestnut-brown. 3
- S14 FRYER'S GLORY. TB. (Fryer, 1919). S. golden brown, tinged crimson; F. bright velvety maroon, veined light yellow from center to base; orange beard. 3-5
- S25 GAJUS. TB. (Goos & Koenemann, 1906). S. light yellow; F. crimson, reticulated white and yellow, with narrow yellow border. 5
- S12 GOLDEN PLUME. TB. (Fryer, 1917). S. rich golden yellow; F. chestnut brown, edged and reticulated yellow. Yellow beard. An improvement over the old Honorabilis.

The plant is equally as thrifty, the flower stalks are a few inches higher, and it is more even height when in bloom.
3-5

- S26 HEBE. TB. (1854). S. white, marked at the edge with soft lilac; F. rich cream, slightly marked at the base with soft lilac. 3
- S4 HER MAJESTY. TB. (Perry, 1903). *Syn. Annie Grey.* S. lovely, rose-pink; F. bright crimson, tinged a darker shade. Late. 5
- S27 INGEBORG. IB. (Goos & Koenemann, 1908). Pure white. Large flowers of handsome form. 1-2
- S28 IRIS KING. TB. (Goos & Koenemann, 1907). *Syn. Iris Koenig; King of Irises; Reine des Irises; Remedés; Roi des Irises.* S. clear lemon-yellow; F. rich maroon, bordered yellow. Large flowers; brilliant colors; very fine. 5
- S29 ISOLINE. TB. (Vilmorin, 1904). S. silvery lilac; F. mauve, with orange beard. Very large, handsome flowers. Splendid form.
- S30 JACQUESIANA. TB. (Lemon, 1840). *Syn. Caroline de Sansel; Conscience; Jacquiana; Jacquinianna; Lord Rosebery.* S. bright, coppery crimson; F. rich maroon. Distinct and beautiful. 30 in. 5
- S31 JEANNE D'ARC. TB. (Vedier, 1907). S. white, border penciled lilac; F. white bordered lilac at base. Very like Anna Farr and of long-blooming season.
- S33 JUNIATA. TB. (Farr, 1909). S. and F. clear blue, deeper than Dalmatica. 3
- S34 KOCHI. TB. *Syn. American Black Prince; Black Prince; Erebe; Midnight; Purple Queen.* S. and F. rich claret-purple. Very handsome. Tallest of the bearded Irises. Large, fragrant flowers. 2-3
- S9 LOHENGRIN. TB. (Goos & Koenemann, 1910). S. and F. uniform, soft shade of cattleya-rose; very large. 3
- S35 LORELEY. TB. (Goos & Koenemann, 1909). S. light yellow; F. ultramarine, bordered with cream.
- S36 MA MIE. TB. (Cayeux & Leclerc, 1906). S. pure white, frilled lavender; F. pure white, penciled and margined lavender. Very beautiful. 30 in. 3
- S37 MANDRALISCAE. TB. *Syn. Machilisea.* S. and F. rich lavender-purple. Large, handsome. Very early; very free bloomer. 40 in. 3
- S38 MITHRAS. TB. (Goos & Koenemann, 1910). S. light yellow; F. brilliant wine-red, with narrow border of deep yellow. 3-5

- S42 MME. CHEREAU. TB. (Lemon, 1844). *Syn. Susannah.* S. and F. white, broadly and handsomely frilled clear blue. If new it would create a sensation. 32 in. 3-5
- S40 MRS. ALAN GRAY. TB. (Foster, 1909). Delicate, pale rose-mauve. Free bloomer. Beautiful. 30 in. 2-3
- S41 MRS. HORACE DARWIN. TB. (Foster, 1888). *Syn. Camellia*; (not Fryer); *Eytharia*. All pure white, except delicate violet netting at the base of the falls and the orange beard. 5
- S44 NIBELUNGEN. TB. (Goos & Koenemann, 1910). S. fawn yellow; F. violet-purple on bronze. Very large. Early. 24 in. 3
- S50 ORIFLAMME. TB. (Vilmorin, 1904). S. light blue; F. rich violet purple. Immense, handsome flowers. Strong grower. 3
- S32 OTHELLO. TB. (Lemon, 1848). *Syn. Berlin; Sappho Neglecta.* S. very dark lavender; F. deep rich purple; medium sized flower of rich coloring; foliage 15-18 in.; blooms, 21-27 in. 5
- S43 PACQUITA. TB. (Lemon, 1848). *Syn. Mme. Pacquette; Pacquit.* Bright red-violet or rose-claret self; beautiful; similar to Caprice, but not so large; early and tall.
- S45 PERFECTION. TB. Barr. S. light blue; F. dark velvety violet-black with orange beard. Handsome flower. 3
- S46 PRINCESS VICTORIA LOUISE. TB. (Goos & Koene-
mann, 1910). *Syn. Prinzessin Viktoria Luise.* S. sulphur-
yellow; F. rich plum, bordered cream.
- S47 PROSPER LAUGIER. TB. (Verdier, 1914). S. light
bronze-red; F. velvety ruby-purple, with orange beard.
Very handsome. 5
- S8 QUEEN OF MAY. TB. (Sal. before 1859). *Syn. Brook-*
siana; Dr. Parnet; Rosy Gem. S. and F. self-colored
bright rose. A lovely soft rose-lavender, almost pink.
Beautiful. 32 in.
- S11 RHEIN NIXE. TB. (Goos & Koenemann, 1910). S. of the
purest white in perhaps any Iris; F. a rich violet-purple,
edged white; standing up well. 3-5
- S10 ROSE UNIQUE. TB. (Farr, 1910). S. and F. bright
violet-rose, nearest approach to a pink Iris. Very early.
2-3
- S48 VICTORINE. TB. (Lemon, 1840). *Syn. Vidonne; Elegans;*
Gladstone; Victoire Lemon. S. mottled blue; F. violet-
blue, mottled white. Beautiful. 27 in.

- S49 WYOMISSING. TB. (Farr, 1909). S. creamy white, suffused delicate soft rose; F. deep rose base, shading to flesh colored border. 3

KNIPHOFIA

TORCHLILY

Listed as Tritoma under the old nomenclature. From the Greek, tres—three, and toma—to cut: in allusion to the three sharp edges of the ends of the leaves.

Unique in appearance, this is one of the most striking groups of plants in cultivation. No one who has ever seen their pyramidal spikes of blazing red flowers, borne in autumn, is likely to forget when and where he "discovered" this plant. The long, fiery, untamed red of the drooping flowers, one hundred on a spike, is a memorable sight. A sky-rocket is not more startling. They require protection in severe weather, and perhaps the best plan is to lift about mid-November, heel-in in a cold frame, and give a sparse covering of leaves before putting on the sashes. Give them air at all times when the weather is suitable. Or carefully dig with as much soil as possible attached to their roots, cut off half the foliage, place in pots or boxes of moist soil, and remove to a cool light cellar, where they should be kept as cool as possible, until it is time to plant outside again, in April. South of Philadelphia, they may stay out doors all winter. We have had them do so here, but they cannot be depended upon. Cut off a goodly portion of the old roots when planting out the following spring.

They like a rich, moderately heavy loam in which to reach perfection. Lovely for borders or massing on the edge of the lawn.

- P715 BONFIRE TORCHLILY. (*K. uvaria grandis*; *Tritoma pfitzeri*; *K. pfizerianna*). This splendid variety, of recent introduction, has become exceedingly popular, and it is little wonder, as its spikes of rich orange-scarlet produce a splendid, picturesque effect during its blooming period. The leafless stems or flower spikes attain a height of four feet, about one foot of which is a mass of narrow tubular fiery scarlet flowers; gorgeous subjects for decorative cut-flower work. This is really the best variety. It should have a sheltered, open, sunny situation and a deep, rich soil. 3-4 8-11

LIATRIS

GAYFEATHER

Meaning of name unknown.

The Liatris produces its flowers on wand-like racemes. They will thrive in poorer soil than most garden perennials, and are very effective and charming plants in the border.

- P478 **pyncnostachya.** (*Lacinaria pyncnostachya* Ag.). CATTAIL
GAYFEATHER. Flower heads pale or rosy purple in a
dense cylindrical spike; one of the choicest and boldest
species. 3-5 8-9
- P479 **scariosa.** (*Lacinaria spicata* Ag.). SPIKE GAYFEATHER.
Flowers deep purple, in an elongated corymb; very orna-
mental. 2 9

LILIUM LILY

From the Celtic word li, which signifies whiteness.

Lilies have always been considered the emblem of whiteness or purity and among the noblest of the garden plants. Their conspicuous flowers, striking colors, and their stately forms, appeal strongly to the eye and to the imagination as well. They are among those old-fashioned plants which frequently and justly come newly into vogue.

By using the Lilies you have a chance to make the garden more artistic and charming for their uses are manifold. They can be grown in beds by themselves with great effectiveness. They can be used in mixed herbaceous borders with entire success because of their varying heights, many colors and different flowering periods and—with the exception of the Candidum, which seems to prefer an open position—most Lilies thrive best when planted in a semi-shaded situation, where the ground can be kept cool and moist by the protection of shrubs and a carpet of lawn grass. They are of the easiest possible culture and perfectly hardy. The bulbs should be planted from 6 to 8 inches deep—with a little sand or sphagnum moss under the base of each bulb—and 12 inches or more apart. They do best planted in the fall. If planted in the spring, pot grown bulbs should be used. The taller growing varieties should be staked. The stakes can be set out at the same time the bulbs are planted, thus avoiding injury to the bulb later and marking where the bulbs were planted, as no growth appears until spring and disappears again the next fall.

- L14 **auratum.** GOLDBAND LILY. Mammoth ivory white
blossom, 6 or more inches across, with a distinct broad
band of gold down the center of each petal and numerous
deep purple spots; conspicuous brown anthers standing
well out beyond the petals. Strong, but pleasing aroma
that can be scented some distance away. It appears to
best advantage massed and scattered through moderately
tall growing shrubs, as it is a shade loving plant and
should be located where it will not have to contend with
the direct rays of the midday sun. 2-4 6-8
- L15 **batemanniae.** BATEMAN LILY. This Lily is somewhat
different from the typical elegans section, being taller,

with finer foliage and less spotted flowers. The color is a particularly gratifying rich orange which lights up a garden most cheerfully when in bloom. It is a first-class species for general garden cultivation.

4 8

- L17 **browni**. BROWNS LILY. This is one of the finest of the garden Lilies. Its large size and great purity of color and splendid form commend it at first sight. The interior of the large, long tube is rich, creamy white, while the flowers are dull purple on the outside. The foliage is strong, abundant and dark green. The species is hardy and of easy culture, except that, like most other lilies, the bulbs are not permanent unless in very favorable soil. Although this species has been confused with *L. japonicum*, it really comes from West China. It resembles *L. longiflorum* more than *L. japonicum*. These immense, large, trumpet-shaped flowers, with a pleasing aroma, have brown anthers forming a great contrast to the white of the cup. This variety does better in a good soil, deeply worked and in fair condition as regards moisture; succeeding well when their roots are shaded. A good plan is to intersperse hardy ferns among them. If planted in heavy soil some leaf mold should be mixed in with sand.
- L2 **canadense**. CANADA LILY. Terminal clusters of bell-shaped, drooping flowers on slender stems. Flowers are varying shades of yellow, with copious spots purplish red. Good species for garden use; likes plenty of moisture and produces large quantities of flowers when established. Will do well in cool north corner, or near pool or stream or in any moist hollow. The sun will not hurt them if the roots are at all times cool and moist. They will make a great showing if properly located.
- L11 **candidum**. MADONNA LILY. Flowers pure pearl-white, fragrant, very rarely tinged with purple on the outside; one of the most ornamental species and an old favorite; very hardy, thriving equally well in sunshine or shade, in light or heavy soils, and in dry or damp positions, with very little attention. Should be planted early.
- L4 **elegans**. (*thunbergianum*). The name *L. elegans* refers to an entire group rather than to a definite species. Either we might say that *L. elegans* is a large species and very variable; producing a great number of cultivated varieties, or that there are a number of closely related groups which pass under this general name. Generally speaking, they

2-3 6-8

2-4 6-7

are among the easiest of all Lilies to grow, and should be grown by everyone planting a hardy garden, as they look sumptuous when well grown in a border under bright sunlight. The flowers are large, erect, cup-shaped, very showy in various shades of red and orange, spotted with brown. The flowers point upright and open wide. They should be planted in the front of the border.

12 in. 6-7

Horticulture varieties of *Lilium elegans*.

- L29 ALICE WILSON. Lemon yellow; thrives in good garden soil. 18 in. 6
- L30 ALUTACEUM. Apricot; will thrive in any ordinary good garden soil. 9 in. 5
- L25 ASTROSANGUINEUM. Dark blood-red with dark spots.
- L31 CENUSTUM MACRANTHRUM. Orange. 2 7
- L26 INCOMPARABLE. Rich crimson red spotted with black; thrives in good garden soil. 18 in. 6
- L27 INDIAN CHIEF. Bright flame color.
- L28 WALLACEI. Vermillion-orange, or bright apricot, spotted.
- L8 **hansonii**. HANSON LILY. Dark reddish yellow, marked with brown spots.
- L7 **henryi**. HENRY LILY. Orange-yellow flowers with long petals that turn backward; marked with not too conspicuous brown spots; dark narrow foliage. Very showy when planted in a mass. 2-3 7-8
- L22 **pardalinum**. LEOPARD LILY. Similar to *L. superbum*, but a bright orange-scarlet. Requires a rich but not too heavy soil. Extremely tall grower. 6-8 7-8
- L3 **regale**. (*myriophyllum*). ROYAL LILY. A new Chinese Lily. Externally the flowers are white, streaked with brown and shades of pink at the tips; the center is canary-yellow, shading to white at the outer edges. The anthers are brown and stick out beyond the end of the flower petals. Strongly fragrant; hardy; desirable for forcing. 3-4 6-7
- L18 **speciosum**. (*speciosum album*). SPECIOSUM LILY. Beautifully formed, pure white flowers on branched stems, gracefully suspended, with a band of palest green down the center of each petal and long chocolate brown anthers; the petals are back curved instead of cup shaped like the indoor lilies. The best late, white Lily that can be planted. 1-4 7-9

Horticulture varieties of Lilum speciosum

- L12 **GREAT SPECIOSUM LILY.** (*L. speciosum magnificentum*). This variety is by far the most magnificent of all the speciosum Lilies. The stems are very stout; leaves a rich, dark green; and flowers from 6 to 8 inches across, the petals turning backward displaying the large, beautiful brown anthers; the color is a rich, deep pink, heavily spotted with rosy-crimson. Its stalks bear as many as ten to fifteen flowers. Good for cutting.
- 1-3 7-9
- L24 **MELPOMENE.** The growth and habit of this variety is quite distinct. It bears blooms of great substance, dark crimson-purple, heavily spotted and margined white. Strong, vigorous growing and—like all the speciosum group—especially adopted for naturalizing and general border planting.
- 3 8-9
- L19 **RUBRUM.** Fine, extra strong variety. White and rosy-red grounds, heavily spotted rich, rosy red, darker than the Great Speciosum Lily. Very prolific bloomer; fine for garden and good for cutting.
- 3-4 8-9
- L6 **superbum.** **AMERICAN TURKSCAP LILY.** A native variety. Graceful stems, terminating in a pyramid of bright orange-crimson flowers, thickly spotted yellow.
- 4-6 7-8
- L1 **tenuifolium.** **CORAL LILY.** Rich scarlet, self colored, turban-shaped flowers nodding on slender stems; very graceful and deserving favorite; fine for massing; especially suitable for beginners; extremely hardy, strong and vigorous.
- 1-2 6-8
- L21 **testaceum.** (*excelsum*). **NANKEEN LILY.** Nankeen-yellow, sometimes spotted with small, reddish dots.
- 4-5 7
- L10 **tigrinum.** **TIGER LILY.** Flowers bright, deep orange-red, with numerous small, distinct, purplish-black spots, in many racemes. Remarkably useful plant whether planted in clumps in the mixed border, in the shrubbery, or in masses in the wild garden. The plant has a strong habit and will thrive almost anywhere and in any ordinary soil.
- 2-4 7-8

Horticulture varieties of Lilium tigrinum

- L9 **DOUBLE TIGER LILY.** (*L. tigrinum florepleno*). Cdd double variety with orange-red spotted flowers.
- 4-6 7-8
- L32 **GIANT TIGER LILY.** (*L. tigrinum splendens*). Apricot yellow with dark spots.
- 3-4 7-8

- L23 **umbellatum.** WESTERN ORANGECUP LILY. Mixed, many shades of red and yellow; stout stems. 3-4 6-7
- L5 **RED CANADA LILY.** (*L. canadense coccineum*; *canadense rubrum*). The flowers and habit of growth are similar to *L. canadense*, but the flowers are red. 2-4 6-7
- L13 **WITTEI.** A Japanese variety; flower white, with yellow band down each petal; very fragrant.

LUPINUS

LUPINE

Said to be derived from the Latin, lupus—a wolf; because this plant devours, as it were, all the fertility of the soil.

When established, the Lupines are effective plants with velvet-like leaves and conspicuous, butterfly-like, free-blooming flowers in terminal racemes. Very lovely plants for the border or for massing. They require a well-prepared soil, for best results, and should never be allowed to suffer for want of water. They do not thrive where there is much lime in the soil. By cutting the flower stems when past their best, they may be induced to give another crop of flowers in the autumn.

- P484 **polyphyllus.** WASHINGTON LUPINE. Flowers deep blue, on large, long spikes. 2-5 5-6
- P487 **BLUSH LUPINE.** (*polyphyllus roseus*). Flowers of a soft, rose-pink color, which darken with age and are produced in great profusion. 3-4 6-9
- P486 **MOERHEIM LUPINE.** (*L. polyphyllus moerheimi*). This is one of the finest novelties; flowering throughout the summer. The fine, long spikes of pink and white colored flowers make it a grand acquisition for cutting purposes, as well as for the garden.
- P485 **WHITE WASHINGTON LUPINE.** (*L. polyphyllus albi-florus*; *polyphyllus albus*). Showy, bold, white flowers. Excellent for the border. 2-4 5-6

LYCHNIS

CAMPION

From Greek., lychnos—a lamp; in allusion to the cottony leaves of some of the species, which were used by the ancients as wicks to lamps.

Perhaps no class of plants has more common or popular names, of which the following is but a partial list: Jerusalem Cross, Lamp Flower, Maltese Cross, Ragged Robin, etc. This genus includes some of the best known and loved of the old-fashioned flowers, and no garden can afford to be without a representative, as they are of the easiest culture and most pleasing habit.

- P489 **ARKWRIGHTI.** A cross between Haage Campion and *L. chalcedonica*, with very large circular flowers varying in color thru crimson, scarlet, orange, salmon and intermediate shades; in bloom all summer. 30 in.
- P490 **chalcedonica.** MALTESE CROSS. Dense heads of brick-red or scarlet flowers; one of the most desirable. 2-3 6
- P491 **WHITE MALTESE CROSS.** (*chalcedonica alba*). A most desirable plant; heads pure white. 2-3 6
- P492 **DOUBLE ROSE PINK CAMPION.** (*L. viscaria splendens florepleno*). Pinnacles of large, brilliant rose colored, double flowers. 9 in. 5-6

OENOTHERA**EVENING-PRIMROSE, SUNDROPS**

Derived from Greek, oinos—wine, and therā—to hunt; the roots of this plant, eaten after meals, were incentive to wine drinking, as olives are now.

Showy and very beautiful plants, for borders, beds or rockwork, where in full sun their fragrant and pretty flowers will nod to the garden all day and invite the friendly bee.

- P532 **missouriensis.** (*macrocarpa; Megapterium missouriense*). **OZARK SUNDROPS.** Large, handsome golden yellow flowers, spotted with red; on trailing, downy stems. 12 in. 6-9
- P533 **pilgrimi.** PILGRIM SUNDROPS. Large clusters of bright yellow flowers. 18 in. 6-8
- P534 **speciosa.** (*Hartmannia speciosa*). Producing a mass of large, erect, fragrant pure white flowers, becoming reddish as they fade; valuable for cutting. 1-2 6-10

PAEONIA**PEONY**

According to the old Greek legend, named after the physician paeon, who used the plant to cure Pluto of a wound inflicted by Hercules.

Everyone loves the Peony. We can all recall the enthusiasm of our grandmothers over the garden "Piney." You can imagine the raptures if those old people were brought in contact with the splendid Peony of today. The wonderfully improved Poenies introduced in recent years are truly the "Queen of Spring Flowers," and are well adopted for massing in beds and particularly valuable for planting in groups throughout the perennial or shrubby border, where their brilliant hues add attraction to all around. Their wealth of flowers rival the finest Roses in coloring and fragrance, and produce, during the flowering season, a gorgeous effect not equalled by any other flower.

Their Culture

Their requirements are so simple—a good, rich deep soil and an open, sunny position; which, however, is not absolutely necessary, as they thrive almost equally as well in a partly shaded position. The Peony is a deep-rooting and gross-feeding plant, hence a deep, rich soil is essential to permanent success. In light soils it is a good plan to give frequent applications of manure water to help the plants develop and mature their crown buds.

The successful flowering of the plant depends greatly on the growth made the previous year, for good crown buds are necessary, hence it is important that the plants be kept growing in their season. After a summer of long-continued heat and drought the plants acquire a half-starved condition and the crown buds are much weakened. The result is diminished vigor in the leaf-growth. Great attention must, therefore, be paid to providing moisture in abundance and a sufficient food supply.

In the case of plants which have been planted but one or two seasons, it would perhaps be advisable to allow them to remain in their present positions and give them frequent applications of liquid manure or a good mulching, (as described in the foregoing pages) but this is best done in September, when the root activity starts again for another season. In the case of old clumps, which have been in the same position for five or more years, and which by now may have exhausted the soil, divide and replant early in September, but don't move your Peonies unless they show signs of exhaustion.

If you do your Peony planting when a couple of inches of new growth is on the plants in spring, then do not expect first-class blooms the same season. You will be among those who complain of the plants being impatient of disturbance, and so they are if disturbed at the wrong time. By the month of April the main roots have begun to grow, and if they are checked the plant has a struggle for bare existence all summer.

Never transplant Peonies in big clumps intact. In a big clump the majority of the buds are not in contact with the soil, and as the best roots emanate from the base of the crown bud or around it, the folly of planting abnormally large clumps is evident. Take the large clump, and with a hand fork split it by driving the fork in an inch or two below the crown. A good planting division should have no more than from four to six eyes. The roots of a Peony twine around each other, and if a knife were used a great deal of waste would ensue, but by wrenching the roots apart this waste is almost entirely done away with. Do not plant too deeply; the eyes should be covered with only about 1½ inches of soil.

As Peonies are liable to damage by strong winds, they should be staked as a preventative. In a mixed border they have the disadvantage of looking untidy toward the end of the season, but this can be obviated by planting a few later-flowering plants, such as Chrysanthemums or Asters, in front of them. Supports, made of two-inch mesh poultry

netting, placed around the clumps, fence-like (as described for *Chrysanthemum coccineum* on page 24) will aid the plants considerably in holding their heavy blooms upright.

Planting should be done in September for best results.

Horticulture Varieties

The name of originator and the date of introduction are given in parentheses where these facts have been ascertained.

- E1 AGLAE ADANSON. (Kelway). Pale pink.
- E23 ALBERT CROUSSE. (Crousse, 1893). Large, full bloom, fresh salmon-pink. Very desirable. One of the finest pinks; fragrant; late.
- E4 ALEXANDRE DUMAS. (Guerin, 1862). Medium size, light violet rose, collar creamy white; fragrant and free bloomer.
- E25 ANDRE LAURIES. (Crousse, 1881). Large full flowers, anemone shaped, violaceous, red; late. Owing to its good keeping qualities, its fine coloring under artificial light, and its fragrance, it is popular as a cut-flower variety.
- E24 AUGUSTIN D'HOUE. (Valot, 1867). Large bomb. Rich, deep carmine with slight silvery reflex; medium tall; free bloomer; mid-season.
- E2 BUNCH OF PERFUME. (Kelway). Very large flower of rose type. Color, light Tyrian rose with silvery border; fragrant; free bloomer; late mid-season.
- E19 DUC DE WELLINGTON. (Calot, 1859). Large flower of good form and substance. White guards with sulphur center; very fragrant; strong grower and free bloomer; late.
- E27 EDULIS SUPERBA. (Lemon, 1824). Large, bright mauve pink; very fragrant; strong grower and free bloomer; very early.
- E14 ELWOOD PLEAS. (Pleas, 1900). Very large, flat, compact flower of rose type. Color a light rose, delicately shading to lilac-white; very fragrant; erect, compact grower. One of the best of the Pleas introductions; late mid-season.
- E22 FELIX CROUSSE. (Crousse, 1881). Large globular flower of brilliant red; very fragrant; strong grower and free bloomer; very attractive; late.
- E28 FESTIVA MAXIMA. (Mieliez, 1851). Very large globular flower of rose type. Color pure white with crimson flecks. Tall, strong grower and free bloomer. One of the oldest and one of the best; early.
- E3 GEN. GRANT. (Terry). Fiery crimson, full double; large flower; robust grower.

- E21 GOLDEN HARVEST. (Rosenfield, 1900). Medium-sized, loose flower, having outer petals of pale lilac-rose, center cream-white with pink; strong, vigorous grower; free bloomer.
- E33 HUMEL. (Anderson). Immense solid bloom of carmined pink; very late.
- E10 JOHN RICHARDSON. (Richardson). Large, flat flowers; center deep pink, gradually fading lighter toward the tips of the petals. Tall grower; fragrant. Considered by many to be one of the best very late varieties.
- E5 L'ECLATANTE. (Calot, 1860). Very large, compact bomb of Tyrian rose; very strong grower; one of the best reds.
- E7 L'ESPERANCE. (Guerin). Large, vigorous, profuse bloomer, with rose pink blooms. A Memorial Day variety.
- E16 LADY ALEXANDRA DUFF. (Kelway,, 1902). An immense cup-shaped flower, with extremely wide imbricated petals. The color of the outer petals is pale rose or a delicate pale pink or blush, shading lighter toward the center. A very beautiful flower. The plants are very showy, free-flowering and robust. Very fragrant. This is one of the best known of the fine Peonies. Mid-season. As many of the first importations of this variety were not true to name, the genuine is still very scarce.
- E6 LEONARD KELWAY. (Kelway). Pink guard petals enclosing a convex cushion of cream petals finished off in the center by a pink crest.
- E12 LORD ROSEBERY. (Barr). Pink, shading to blush.
- E13 MARGUERITE GERARD. (Crousse, 1892). Very large, full flower of flesh-pink, fading to creamy white; strong grower and free bloomer; extra.
- E15 MARIE CROUSSE. (Crousse, 1892). Very large, full, globular flower of delicate shell-pink, with salmon tints. Tall, erect, strong grower and free bloomer. The flowers are borne on stiff stems and are very fragrant. A most beautiful and desirable variety in every way; mid-season.
- E29 MARIE LEMOINE. (Calot, 1896). Large, very compact flower of rose type. Pure white, with cream-white center and occasional carmine tips. Extra good; very late.
- E20. MME. CALOT. (Miellez, 1856). Very large flower of rose type. Flesh pink, with center shaded darker. Very fragrant; strong grower; tall, free bloomer, and very early.
- E31 MME. COSTE. (Calot, 1873). Guard petals and center of rose pink and a collar of deep cream. The whole flower has a particularly fresh look and is very charming; early mid-season.

- E30 MME. DE VERNEVILLE. (Crousse, 1885). Large, very full, pure white flower, with blush center when first opened, fading to pure white, with prominent carmine fleck; fragrant; very free bloomer; mid-season.
- E26 MONS. JULES ELIE. (Crousse, 1888). Very large flower of a deep shell-pink. The collar is light and shaded amber-yellow at the base. Very fragrant; medium height; strong grower and free bloomer; one of the very best.
- E17 MONS. MARTIN CAHUZAC. (Dessert, 1899). A good-sized globular flower of very dark purple garnet, with black reflex. Said to be the darkest Peony in existence. Strong, vigorous grower and free bloomer. A very distinct and handsome variety; early mid-season.
- E8 MR. MANNING. (Keway, 1894). Medium-sized, semi-rose type. Light carmine-rose, small tuft in the center; tall, strong, free bloomer; mid-season.
- E9 PRAIRIE SPLENDOR. (Rosenfield, 1908). Violet-rose, tipped with silver.
- E32 RICHARD CARVEL. (Brand, 1913). Very large, globular bloom of a brilliant crimson. Tall, strong grower; free bloomer; very early.
- E18 RUBRA SUPERBA. (Richardson, 1871). Large, compact flower of rose type. Deep rose carmine or crimson; medium grower and rather shy bloomer; very late.
- E11 TRIOMPHE DE L'EXPOSITION. (Calot, 1865). Large, compact flower of rose type. Light shell-pink, minutely splashed with violet-rose. Guard petals fade to nearly white. Strong grower and free bloomer. Not a new one, but very desirable and satisfactory; mid-season.

PAPAYER

POPPY

From the Celtic papa, which signifies pap or the soft food given to children, in which the seeds of poppies were formerly boiled to make the infants sleep.

Papaver orientale

ORIENTAL POPPY

For a dazzling, brilliant color display the Oriental Poppies are absolutely unrivaled among hardy border plants. The sight of a large clump of these, standing out in bold relief against a background of green, commands instant attention by their most dazzling display of enormous flowers in most splendid colors and shades of rich, heavy, satiny texture. They should be planted wherever a splash of distinct and glowing color is required, as their free-flowering qualities render them conspicuous in any position.

Horticulture varieties

The blooms are borne on thick, hairy stems, about 3 feet high, with strong, rough leaves and if cut in the early morning—as the buds are about to open—before the full rays of the sun fall on them, and the outer green calyx removed, they are excellent for house decoration. A good, deep, rich soil and an open situation suits them best. As they die down soon after flowering, making their appearance again in the fall, the places where they are planted should be marked to prevent their being disturbed with the hoe during their resting period. Give a good soaking of water occasionally during very dry weather, and a mulching of straw or leaves in the autumn. They should be planted out during their dormant season, which is August and September, at which time they are easily handled. After September they start into active growth again, preparatory to next season's bloom, and should not be disturbed.

- 01 BEAUTY OF LIVERMORE. Deep crimson flowers, very large. One of the best of recent introduction.
- 02 BLUSH QUEEN. Pale blush pink, the base blotched with deep purple; very large.
- 03 BRIGHTNESS. Bright scarlet.
- 04 CERISE BEAUTY. Large flowers of a beautiful shade of cerise-pink, with blood-crimson center, and glittering black blotches at base of petals.
- 05 DUKE OF TECK. Fine dark crimson form; large flowers on strong stems.
- 06 GOLIATH. The largest and one of the most effective, enormous rich scarlet flowers in great abundance.
- 07 GROSSFURST. Very large brilliant dark blood-red.
- 08 JEANNIE MAWSON. Handsome salmon-pink flowers of unusual size.
- 09 JOYCE. A soft shade of cerise; quite distinct.
- 010 MAHOGANY. (*Mahony*; *Muhony*). Deep maroon, very distinct and handsome.
- 011 MARIE STUDHOLME. Salmon, with a beautiful silvery sheen; quite distinct and a most pleasing shade.
- 012 MRS. MARSH. Fine, well formed flower; rich crimson-scarlet, irregular blotch of white on each petal.
- 013 MRS. PERRY. A curious shade of orange-apricot; distinct.
- 014 MURIEL RUSSEL. An improvement on Perry's white.
- 016 ORIFLAMME. Rich scarlet.
- 015 ORIENTAL KING. Large crimson-scarlet flowers.
- 017 PARKMAN. (*Parkmani*; *P. orientale parkmani*). Very large, intense scarlet flowers.
- 018 PERRY WHITE. (*Perry's White*). Creamy white, crimson center.
- 019 PRINCE OF ORANGE. Bright orange-yellow shade with maroon blotch at base of petals; quite distinct.

- 020 PROSPERINE. Long, tapering flowers, dark lilac, shading to carmine-pink.
- 021 PSYCHE. Delicate rosy blush, shading to white.
- 022 REMBRANDT. Dark crimson flowers.
- 023 ROYAL SCARLET. Flowers 6 inches across, of a rich, glowing scarlet.
- 024 SALMON QUEEN. Large flowers of a lovely salmon scarlet.
- 025 TRIBLY. A beautiful cerise-scarlet.
- 026 VICTORIA LOUISE. (*Princess Victoria Louise*). Beautiful new variety of pure rose flowers in wonderful profusion; the best of the rose-colored varieties.

P. nudicaule**ICELAND POPPY**

The Iceland Poppy is the glory of the Arctic region. Dwarf growing, delicate flowered, and myriad colored little Poppies that are exquisite for edging the border or in the rock garden. Bloom very profusely and make wonderful cut-flowers. They can be had in the following colors:

050 Orange. 051 Yellow. 052 White.

PENTSTEMON**PENTSTEMON**

From Greek. penti—five, and stemon—a stamen; because of the four perfect and one imperfect stamen of the genus.

Few plants are as beautiful as the Pentstemons or produce as brilliant an effect in beds and borders during summer and autumn. They are graceful in growth, while the elegant beauty of their pyramidal spikes of large gloxinia-like flowers elicits the admiration of all. They thrive in any ordinary garden soil in an open and sunny situation and are useful in the rockery. With the exception of the *Gloxiniodes* type, which requires protection, they are perfectly hardy.

P580 **albidus** A native of Pennsylvania, Missouri and Colorado.

Not specially showy, but useful to mix with other varieties. Good in masses along streams.

P578 **gloxiniodes**. GLOXINIA PENTSTEMON. Spikes of large, gloxinia-like flowers in a great variety of bright colors, including rose, cherry, crimson, purple, lilac, etc.

P581 **hirsutus**. (*pubescens*). EASTERN PENTSTEMON. Drooping, bright, rosy-purple flowers; densely bearded, in loose, open pinnacles. The effect of a bed of these plants is very dazzling.

P577 **laevigatus digitalis**. FOXGLOVE PENTSTEMON. Large spikes of long, purple-white, Foxglove-like flowers, with purple throats, abruptly inflated. Very pretty for the border.

P575 **torreyi**. (*P. barbatus torreyi*). Spikes of brilliant scarlet flowers; throat of corolla, naked or very slightly bearded; lips quite long; excellent.

PHLOX

PHLOX

From Greek, phlox—a flame; referring to the brilliancy of the flowers.

There are several types of this popular garden flower, but as crosses of these various types have resulted in a great improvement in these flowers of recent years, no attempt is here made to list the varieties under their respective classes, except the *Subulata* and *Argillacea* varieties which are so different from the other types.

Phlox, as we know them today, carry their great heads of many colored flowers on stout stems from 1½ to 3 feet high. The flowers are in every imaginable shade of scarlet, crimson, shell-pink, lilac, dark violet and white. In a good many cases the flower color is set off by a striking eye of quite a different shade. Their neat habit, bright colored flowers, profusiveness of bloom, and ease of culture, make the Phlox a great and deserving favorite among all lovers of the beautiful in gardens. There is something about them, unlike any other garden favorite, that appeals strongly to one's imagination and sentiment. Whether it is their delicate sweet fragrance that steals to us in the summer twilight, or the beauty and rich daintiness of their colors whose warmth reaches the heart and makes it beat a bit faster for the beauty in the world, we know not. But we do know that they are wonderful and our garden cannot be what it is without them.

Next to the Irees and Peonies, they are the most useful hardy plants we have, filling in, as they do, the gap between the early summer and the fall blooming plants.

Culture

Phlox may be planted in the autumn up to the 15th of October, so that they may become well rooted before winter; or as soon as the frost leaves the ground in the spring, as growth begins very early. Whether planted in spring or fall, a mulch of leaf mold thrown around the roots will be of benefit to the plants. Use old manure if you prefer. Plant 18 inches apart.

Their natural season of bloom is in July and August, but by pinching out the tops of part of the plants before the buds have formed, they will bloom much later and form many branches. This process may be repeated several times, if desired, throwing the blooming season into the late fall.

Old plants should be lifted every two to three years, and portions from the outside edge of the clumps replanted afresh in ground that has been well tilled and fertilized. Beds which have not been disturbed are all the better for having a dressing of fertilizer forked lightly into

the soil. When a growth of 4 or 5 inches has been made in spring, it is well to thin the shoots out, leaving from five to seven shoots to develop. These should be staked to prevent breaking over by strong winds. Apply a mulch after a heavy rain and in dry weather water copiously. The individual blossoms and heads of bloom, far larger than otherwise, produced by the extra trouble, will amply repay you.

If, as is sometimes the case, in warm, moist seasons, Phloxes are attacked by mildew, sprinkle a dressing of powdered sulphur on the leaves, and this will check the fungus.

- X100 **argillacea**. An entirely new species from the Michigan sandunes that is as hardy as an oak if not too wet in winter. It blooms about Memorial Day and lasts for two months or more. Its habit differs from other types in that it grows in a bushy form about 18 inches high and its pretty steel blue flowers cover the entire bush at the same time. The effect is very striking and attractive.
- X101 **subulata alba**. WHITE MOSS PHLOX. This type of Phlox is very dwarf and creeping in habit and is useful for colonizing where it is desired to cover the earth with a tufted, dense, evergreen mat. It is much used in cemeteries. It blooms profusely in the spring, and is very sweetly scented. Color pure white.

Horticulture varieties of Phlox paniculata or of hybrids

- X21 **BACCHANTE**. Tyrian-rose with crimson-carmine eye; enormous.
- X31 **BARON VON DEDEM**. A variety somewhat on the style of Coquelicot, but it produces much larger trusses and its flowers are nearly twice the size. In color it is of a glistening scarlet blood-red. Very attractive and certain to become popular.
- X43 **B. COMTE**. Rich satiny amaranth.
- X24 **ECLAIREUR**. Flowers large, bright purple-carmine with lighter center; of fine form.
- X27 **ELIZABETH CAMPBELL**. Very bright salmon pink with lighter shading and dark red eye; an entirely new shade; very large spikes.
- X25 **EUGENE DANZANVILLIERS**. Lovely soft lilac-blue, large white center.
- X32 **EUROPE**. Very large, perfectly formed, pure white flowers, with crimson center; extra size, fine shaped truss.
- X37 **GEORGES STROEHLIN**. Flowers of great size borne in enormous clusters; of a fine orange-scarlet shade with deep colored eye.
- X40 **HENRI MURGER**. Purest white, with deep rose center; handsome truss.

- X28 JULES SANDEAU. Dwarf; very large flowering; pure pink.
 X41 L'AIGLON. Very large panicles and flowers; carmine-rose, shading darker toward the center; extra fine.
 X1 MISS LINGARD. Pearly white flower, with invisible pink eye. Very remarkable bloomer, producing two or three crops of flowers during the season; indispensable as a cut-flower.
 X26 MME. PAUL DUTRIE. Soft pink color, resembling the shade of a *Cattleya*, suffused with white.
 X30 MONTAGNARD. Brilliant crimson-amaranth; large handsome truss and flowers. Very tall variety of unusual distinction.
 X23 MRS. JENKINS. (*Independence*). Pure white, enormous truss; very fine flower and free bloomer.
 X35 RICHARD WALLACE. Pure white, with maroon center; tall grower.
 X34 VON HOCHBERG. (*Comte von Hochberg*). Very large; dark crimson; the finest of its color, and one of the handsomest of all Phloxes.

PHYSOSTEGIA

FALSE-DRAGONHEAD

From Greek physos—a bladder, and stege—a covering; referring to the inflated fruiting calyx.

Sometimes called obedient plant because the corolla stays for several hours in the position it is turned, to the right or left, as desired. One of the most beautiful of our midsummer flowering perennials, native to this country, bearing showy spikes of very pretty, bell-shaped or tubular flowers and not unlike the Heather.

- P586 **virginiana.** (*virginica*). VIRGINIA FALSE-DRAGON-HEAD. Flowers of a pretty soft pink. 3 7-9
 P588 **virginiana speciosa.** (*speciosa*). TALL CLUSTER FALSE-DRAGONHEAD. Very delicate pink flowers in dense panicles. 3-4 7-8
 P587 **WHITE FALSE-DRAGONHEAD.** (*P. virginiana alba*). Showy spikes of pure white tubular flowers.

PLATYCODON

From Greek, platys—broad, and kodon—a bell; referring to the form of the flower.

Very handsome hardy perennials with beautiful large bell-shaped flowers somewhat like the *Calpanulas*, and form neat, branched bushes of upright habit. After the third season each plant will have from ten to twelve stalks covered with the lovely blue or white blossoms for nearly

a month. When in the bud state, they are inflated like balloons. Very effective for borders or the rock garden. They are free from attack of insects, and if planted in good soil and well covered in late autumn with a litter of leaves, will be found to be quite hardy. They do best when planted in early spring.

- P589 **grandiflorum.** (*Campanula grandiflora*; *Wahlenbergia grandiflora*). BALLOON FLOWER. Very large, deep blue cupped, star-shaped flowers. 3 7-8
- P590 WHITE BALLOON FLOWER. (*P. grandiflorum album*). A large, pearly white flowered form of the above.

RUBECKIA

CONEFLOWER

Named in honor of Olaf Rudbec, professor of Botany at Upsal.

One of the most popular and attractive of the autumn flowering perennials for the mixed garden and for massing, and much valued for cutting. They are of the easiest culture, perfectly hardy and very free-flowering. The discs of the flowers are raised, forming buttons or cones, giving a unique appearance.

- P631 **speciosa.** (*neumanni*). SHOWY CONEFLOWER. Handsome, rich orange-yellow flowers, with deep purplish-black cone, borne on stiff, wiry stems. Superb for massing in borders or for half shady positions under trees. 2-3 7-9
- P633 (*purpurea*). See *Echinacea purpurea*.

SALVIA

SAGE

From the Lat'n. solveo—to save or heal; referring to the medicinal qualities of the common sage.

It would be difficult to over-estimate the value of these plants in the perennial garden, and it is almost compulsory to employ them in any general scheme of planting. They can be had in bloom from June until cut by severe frost. They revel in a good, rich soil, and take all the sunshine they can get. The tall-growing varieties should be planted in clumps and kept carefully staked and tied until they attain their full height. All are hardy, but the precautionary covering of a few leaves during severe weather will insure perfect safety.

- P639 **azurea grandiflora.** (*pitcheri*). GREAT AZURE SAGE. Of branching habit and large flowers of a rich gentian-blue color. One of the most admired plants during the early autumn. 3-4 8-9

- P637 **greggi.** AUTUMN SAGE. A beautiful and extremely hardy plant from the cold, arid mountains of Southwestern Texas. It flourishes and blooms profusely in hottest and driest weather. Its flowers are a dark soft crese-crimson, somewhat like the American Beauty Rose. When massed in a solid bed or bordering a shrubbery it is very effective and fine. Protection should be given during severe weather. 2-3 6-10
- P640 **uliginosa.** BOG SAGE. This is a gem and certainly one of the best perennial novelties of recent years; its flowers are borne on long, lateral shoots; they are of a pretty cornflower-blue, with a distinct white eye, and are produced in abundance on branched spikes, frequently 6 inches long. A splendid subject for the back of the border. 5-6 6-10
- P638 **WHITE AUTUMN SAGE.** (*Salvia greggi alba*). A pretty white flowered variety, which makes a good companion to the red-flowered variety greggi. 2-3 6-10

STATICE

THRIFT

From the Greek work, meaning astringent; name given to it by Pliny.

Very ornamental genus of easy culture, but prefers a rather deep, loose soil. From the delicate nature of the flower panicles, the species are better suited to rockwork and isolated positions, for effect, than mixing in a crowded border. Useful for cut flowers, especially for mixing with other flowers. The panicles, when cut, can be hung up and dried, lasting for several months when so treated.

- P685 **Limonium latifolium.** (*latifolia*). Handsome plants with heads of dark blue flowers, thrown above its evergreen, leathery leaves. 18-24 in. 6-7

STOKESIA

STOKESIA

Named after Jonathan Stokes, an English botanist, 1755-1831.

Stokes' Aster, as it is often called, is one of the rarest, choicest and most distinct of American hardy perennial herbs. It somewhat resembles a China Aster; perfectly hardy; of easiest culture; succeeding in an open, sunny position; and excellent for cutting purposes. It can be used with fine effect in masses or beds of any size.

- P687. **laevis.** (*cyanea*). STOKESIA. Handsome lavender-blue Cornflower-like blossoms, which measure from 3 to 5 inches across, in great profusion. 12-18 in. 6-9

- P688 WHITE STOKESIA. (*Stokesia laevis alba*). A pretty pure white variety of above. 12-18 in. 6-9
 P689 PINK STOKESIA. A pink variety of the same. 12-18 in. 6-9

THALICTRUM

MEADOWRUE

Old Greek name, probably derived from thallo—to grow green; from the bright color of the young shoots.

These stately plants should be grown more, if it were only for their finely cut foliage, which much resembles the foliage of the coarser maiden hair ferns. They are valued for their feathery heads of flowers, contrasting with their handsome stems and leaves, which are often of a purple cast. They are excellent subjects either for half shade or full sunshine, and thrive in any good loamy soil. Well suited for the mixed border, while the dwarfer varieties are very suitable for the rock-garden.

- P695 **aquilegifolium.** (*rubellum*). COLUMBINE MEADOWRUE. It is a remarkable handsome species, with Columbine-like, graceful foliage and heads of feathery, tassel-like flowers; sepals white, stamens purplish. 1-3 5-7
 P697 **glaucum.** DUSTY MEADOWRUE. Fine cut foliage; bronzy-yellow flowers. 2 6
 P694 **MAIDENHAIR MEADOWRUE.** (*T. minus adiantifolium; adiantifolium*). The foliage of this plant so closely resembles the Maidenhair Fern that it is often mistaken for the latter when seen growing in the nursery beds. It makes a very beautiful plant; is quite hardy and has greenish-yellow, drooping flowers. 1½-2 6-8
 P696 **WHITE COLUMBINE MEADOWRUE.** (*aquilegifolium album*). Pure white flower of aquilegifolium. 1-3 5-7

VALERIANA

VALERIAN

A medieval name, said to be derived from valere—to be healthy; in allusion to its powerful medical qualities. Linneus says it is named after a certain King, Valerius.

The Valerian is one of the characteristic plants of old gardens, being prized for the spicy fragrance of its numerous flowers in spring. Hardy and of easiest culture.

- P726 **Centranthus ruber.** (*coccinea*). Showy heads of bright red flowers. 2 6-10

- P728 **officinalis**. COMMON VALERIAN. Very fragrant rose colored flowers. 2-3 6-7
- P727 WHITE VALERIAN. (*V. officinalis alba*). Pure white flowers in clusters; fine for bouquets. 2 6-10

VERONICA

SPEEDWELL

A medieval name of doubtful origin, probably from hiera eicon—a sacred image; in allusion to the legend of the sacred handkerchief from St. Veronica.

These are among the prettiest and most useful of herbaceous plants, and bear almost exclusively blue flowers, of which there are none too many. The taller forms are very pretty border plants, while the more dwarf, spreading forms are well adapted to the rockery. Unexcelled for cutting purposes.

- P735 **longifolia subsessilis**. CLUMP SPEEDWELL. It is the handsomest blue-flowered plant we know of, completely studded with its spikes of blue flowers. Its flowers are produced on stout stems, in dense racemes, from the axils of the upper leaves, and are fine for cutting. It is perfectly hardy and increases in strength and in beauty each succeeding year. It makes the best blue-flowered, hardy border plant obtainable and a valuable combination with such flowers as Foxgloves in the back of the border. 2-3 8-10
- P737 **spicata**. SPIKE SPEEDWELL. Regarded as one of the better border Speedwells, thriving in an open soil away from shade; clear blue flowers with purple stamens. 2-4 6-8
- P730 **spuria**. (*amethystina*). BASTARD SPEEDWELL. Amethyst-blue flowers on short spikes; one of the best. 1-3 5-6
- P739 **virginica**. CULVERS-PHYSIC. A bold and stately habit, with fondness for rich soil, and much sun; flowers many, white or pale blue. 2-5 8-9

YUCCA

YUCCA

Native Indian name applied to these plants.

The Yuccas are somewhat tropical in appearance and actually belong in the semi-tropics or even farther down on the map. They are all rather spectacular species and most of them decidedly ornamental. A few of them are relatively hardy and grow quite successfully in the northern States. They are evergreens, with long, narrow, spiny-pointed leaves,

somewhat similar to the Iris, and panicles of large white, nocturnal flowers on tall spikes well above the foliage, frequently shaded green or purple, giving a fine tropical effect.

- P760 **filamentosa**. COMMON YUCCA. This can be classed at the head of the list among hardy ornamental foliage and flowering plants. Its broad sword-like foliage and branched spikes of large, fragrant, drooping, creamy-white flowers make it an effective plant for all positions. It prefers a fairly dry, warm, sunny position. The delicious perfume is given off at night, a fact of which many garden makers are ignorant, as the blooms are practically scentless during the day. It prefers a sandy loam. 4-5 6-7
- P761 **glauca**. (*angustifolia*). A variety with narrow glaucous green foliage; very free-flowering, producing dense spikes of creamy-white flowers. 3-4 6-7
- P762 **VARIEGATED COMMON YUCCA**. (*Y. Filamentosa variegata*). Identical with *filamentosa* excepting that the foliage is beautifully and distinctly margined with creamy-white; a rare and most effective plant. 4-5 6-7

Auxiliaries to the Perennial Garden

GLADIOLUS

From a Latin diminutive of gladius—a sword and means little sword; because of the sword-like foliage.

There are hundreds of named varieties of these beautiful flowers, requiring the efforts and time of a specialist to care for and keep separate. But a mixture of these various varieties, all colors, are quite an acquisition to the hardy garden when planted in clusters of a dozen or more, planting them in irregular clump forms, or in lines toward the front of the border. Avoid straight lines, however, as they make a stiff appearance. The leaves, like the Iris leaves, will help to beautify and fill in any bare space, even when the flowers are not in bloom. Plant the corms 6 inches deep, in sandy soil and 4 inches deep in clay loam, 3 inches or more apart either way, and they will not need staking. They can be planted any time after the ground can be worked in early spring, up to June. If planted later, frost may interfere with their blooming. Cut off the flower spikes after blooming and lift the corms, before freezing weather, when the leaves start to turn brown. Dry them in the sun a day or so, clean off the roots, dirt and small cormels, and store away in a dry, cool cellar, until next season. The small cormels can be kept in damp sand at a temperature above freezing and if planted out in the spring, sand and all, in a shallow trench, they will develop into small size bulbs that can be treated like the large ones and will bloom the following season.

SALVIA

SCARLET SAGE

The Scarlet Sage has long been a favorite bedding plant, bearing long spikes of flowers in great profusion from July to frost. The plants should not be set out until the weather has become settled and warm. Unlike their cousins, the Hardy Salvia, they are not hardy and will die with the first hard frost.

- A1 AMERICA. This is undoubtedly the earliest, freest and most continuous bloomer of all Scarlet Sages, and what is still more important, the most uniform in habit of growth. Its dwarf, bushy, compact growth, seldom reaches over 15 inches high, but is literally aglow with large spikes of brilliant scarlet flowers, thrown well above the plant, making a total height of about 2 feet. The importance of this uniform growth will be appreciated by those who use Scarlet Sage for beds or borders or the front of their porch.

- A2 BONFIRE. Makes a fine, medium dwarf, compact bush 2 feet high, and spreading about 2 feet. Its erect spikes of brilliant scarlet flowers stand clear above the dark green foliage and completely cover the plant. It will attract immediate attention in the garden and is one of the most effective and gorgeous plants in cultivation.
- A3 SPLENDENS. This is the old-fashioned, Common Sage. A tall variety, with beautiful bright scarlet flowers; 3 feet.



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